INDUSTRIAL EQUIPMENT NEWS

JULY - 1950
VOL. 15 • NO. 7

The Original IEN

INDUSTRY'S MOST COMPLETE PRODUCT INFORMATION SERVICE

What's New IN EQUIPMENT, PARTS, MATERIALS

AFFILIATED WITH THOMAS REGISTER OF AMERICAN MANUFACTURERS

Product Information
for specifiers and buyers in all industries

▼ BRIEFITS—Identify by IEN - 6232 if you write the maker ▼

CONVEYING . . Belt type equipment in standardized packaged unit elements

Source: BARBER-GREENE CO.
629-33 W. Park St., Aurora, Ill.

Redi Fab is a new in stock assembly of belt conveyor elements, each to standard and dimensions, which the company's records show to have been in greatest demand over the past thirty-three years. These elements are offered for field erection by the user to meet any combination of specific requirements. The illustration has been taken across the top of a two-page spread in the literature.

Three belt widths are 18, 24 and 30 inches. Length ranges is 18 to 144 ft. on the 18 in. belt, to 192 ft. on the 24 in. and to 192 ft. on the 30 in. size. Maximum lump size that can be handled efficiently is 6, 8 and 12 in. when mixed with fines. Maximum lift varies based on 28 deg. angle, is to 44½, 50 and 31½ feet. Capacity is 150 to 400 tons per hr. based on material such as sand, gravel, stone weighing 100 lb. per cubic foot.

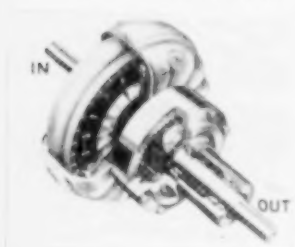
The elements in stock include the structural foot and head end terminals with the belt pulleys and the intermediate structural sections, one side of the frame of 30 in. the electric motor or internal combustion engine and the conveyor belt. Stocks of each of these elements are available for each of the three belt widths.

Catalog RF, 44 pages, presents a remarkably understandable, complete and efficiently illustrated story of the company's assembly of equipment elements to make up a belt conveyor for requirements that have been found largely universal. With its aid a user can "select his own".

▼ BRIEFITS—Identify by IEN - 6233 if you write the maker ▼

DRIVE . . Variable speed transmission holds tension constant in winding work

Source: TWIN DISC CLUTCH CO.
1401 Racine St., Racine, Wis.



Hydro-Wind is a new assembly of the company's hydraulic coupling and planetary gearing for application in a material-winding drive as for paper, plastic sheet, wire. The unit acts as a slip clutch or similar device to hold constant the work tension and the linear speed as roll of the material increases in diameter. Application can be made also as a brake to provide retarding action as an unwinding roll decreases in diameter. In normal installation, requiring a range of driving speeds, the new unit applies with a standard variable-speed drive.

The input shaft connects to the coupling housing and through it to the ring gear in the planetary assembly. Valves in the housing on the two sides of the central rotor act as the pumping element to drive the oil contained in the housing against the rotor blades. The rotor, in turn, is connected to the planet gear ring carrier. The output shaft is fitted with the central sun gear which is in mesh with the planet gears.

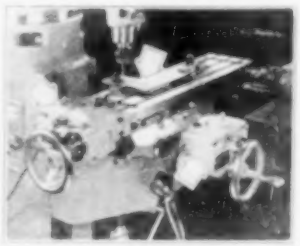
As the torque load increases or decreases the transmission automatically changes the output torque to hold the required tension and linear speed to the work. Rating is ⅓ to 25 hp. at 2,800 rpm. Overall diameter is roughly that of an electric motor of rating equal to that of the hydro transmission.

Watch for announcement in this space next month on how to reserve your free copy of Thomas' Register Junior, 1950 Edition.

▼ BRIEFITS—Identify by IEN - 6234 if you write the maker ▼

POSITIONING . . Hand dial controls locate machine table by co-ordinates

Source: BENZON MACHINE CO.
706 Washington Ave., Lansdale, Pa.



Coordinator [illegible] to mount on the longitudinal and cross movements of a machine table with an a boring or milling machine. Each attachment carries stops to which is provided a predetermined sequence of movements and later [illegible] can be set up for manufacturing purposes. The stops are [illegible] to the machine locations and are set for [illegible] a given overall range of [illegible] an accuracy least known as the Brownfield. Each set of stops is "memory" [illegible] a predetermined [illegible] direction and can be [illegible] and checked [illegible] to 40 operations.

Positions are indicated by numbers and letters to coordinate [illegible] Top of each Coordinator head [illegible] and adjustable cams indicate to the operator that he [illegible] The table and the tools are [illegible] No measuring or reading of graduated dials is required. Coordinator can be maintained to "tenths".

▼ BRIEFITS—Identify by IEN - 6235 if you write the maker ▼

METAL CERAMIC . . Composite material supplied by company in molded shapes

Source: HAYNES STELLITE DIVISION
723-27 S. Lindsay St., Kokomo, Ind.

Illustrated data
properties, sizes
working suggestions
in 12 page booklet
Metamics

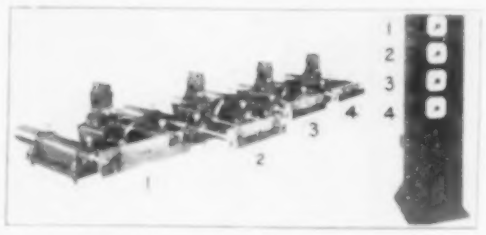
Metamic LT-1 is the first of a new line of materials [illegible] with possibilities of application [illegible] such as aluminum and a metal constituent and as [illegible] glass. The powders are molded as in manufacture of powdered metal parts to produce light, [illegible] shaped parts, [illegible] deflection plates, flame nozzles, small valves, bushings, [illegible] bearings. Service temperatures can run as high as 1000 deg. F.

The ceramic provides a high melting point, is non-ductile and non-rusting. It resists deformation under high stress at elevated temperatures. It protects the metal content from oxidation and from solution attack by molten steels. The metal content provides thermal conductivity and shock resistance. The molded pieces can be machined with carbide tools.

▼ BRIEFITS—Identify by IEN - 6236 if you write the maker ▼

SORTING . . Electronic equipment measures and ejects lumber by length

Source: BUFFALO ELECTRONIC CORP.
427-31 Southwood Drive, Buffalo 17, N. Y.



Multiple assembly [illegible] Mounted on predetermined [illegible] a conveyor. Improved original [illegible] so that operator [illegible] the passing [illegible] through the control station to the [illegible] along the conveyor line. When [illegible] is reached anything it is pushed [illegible] the proper [illegible] receiving equipment.

In a typical installation in a two-working plant a total of [illegible] processed in a working day. The [illegible] and the length range of each is [illegible]

WHAT DO YOU NEED?

READER SERVICE FORM . . . Look between pages 16 and 17 or 80 and 81 and "lift" the form you find there. Keep it beside you as you look through the pages. Note on it the numbers of the products on which you want further information. Then either mail it to us, so we can forward your requests to the manufacturers, or use it as your guide to write direct.

From an Assistant Purchasing Director

[illegible]

Departments

READER SERVICE FORM — Page 16-17 or 80-81
SUBJECT INDEX — Page 94
COMPARISON — Page 4
NEW LITERATURE — Page 24
NEWS NOTES — Page 70
"I WISH I HAD" — Page 96

Our selections in this issue

ALUMINUM — Page 81
CONVEYING — Page 58
DID YOU MISS THESE? — Page 48, 49
DRIVE — Page 15
HEATING — Page 73
LIGHTING — Page 74
PRESS — Page 89
PRESS TOOLS — Page 2
PRESS TOOLS — Page 19
PRINTING — Page 1
PUMP — Page 40
TESTING — Page 92

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THOMAS PUBLISHING COMPANY
461 - 8th Ave., New York 1, N.Y.—LOngacre 3-1546

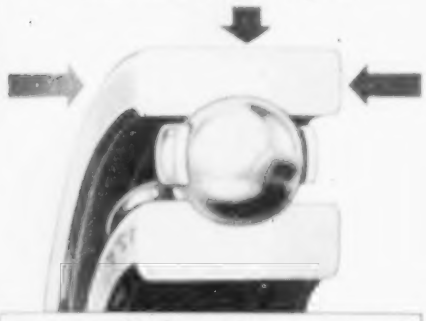
FILL IN AND SEND ALONG TO OTHERS INTERESTED IN PRODUCT INFORMATION

- Plant Operating Mr.
- Production Mr.
- Engineering Mr.
- Product Design Mr.
- Purchasing Mr.

▼ SKRIFTT—Identify by IEN-6237 if you write the maker ▼

RADIAL LOADS & THRUST
From Any Direction

Taken by one single row ball bearing (either sealed-for-life or plain)



Click into this for greatest simplicity and economy of mounting. The famous New Departure rear wheel bearing on leading cars is an example . . . Remember . . . no other bearing, not of dual type or not used in opposed pairs can equal this load service. New Departure, Division of General Motors, Bristol, Connecticut.

NEW DEPARTURE
BALL BEARINGS

▼ SKRIFTT—Identify by IEN-6238 if you write the maker ▼

FREE! 32-PAGE HANDBOOK
SHOWS HOW TO STOP CONDENSATION DRIP

NoDrip

Stops Drip from:
- ✓ Cold water pipes
- ✓ Water filter tanks
- ✓ Metal or concrete ceilings
- ✓ Basement walls
- ✓ Condensers
- ✓ Air Ducts
- ✓ Blower pipes
- ✓ Dust Collectors
- ✓ Crystallizers

Learn how you can control condensation drip from pipes, tanks, ceilings—from metal, wood or masonry surfaces.

LOW COST — EASY TO APPLY

Anyone can apply NoDrip, the trade-duty insulation type coating. Brush it on or spray it on. Use it on pipes or equipment where temperature differential cause condensation. Save money by preventing rust and corrosion. Decrease sound, decrease vibration, generally improve working conditions.

HANDBOOK SHOWS HOW

Send today for your copy of the NoDrip HANDBOOK which tells what this plastic-like material can do for you. It's the modern solution to condensation drip problems.

Send for your free Handbook now!

J. W. MORTELL CO.
Insulation Coatings Since 1901
Dept. IE, Kankakee, Ill.

▼ SKRIFTT—Identify by IEN-6239 if you write the maker ▼

Rigidized Metals®

Add Utility and Sales Appeal in 13 Ways!

There are 13 new performance characteristics in design strength, cured and textured Rigidized Metals for extra utility, added sales appeal and to make less metal do more work. If you use flat rolled metals for any purpose, you can use Rigidized Metals more profitably. Investigate! Write today!

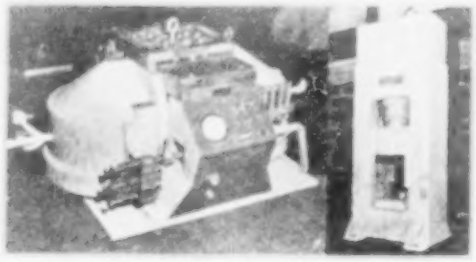
SEND FOR CATALOG 1-D SWEET'S FILE for Product Designers

Rigidized Metals Corporation
Sales Offices in Principal Cities

▼ SKRIFTT—Identify by IEN-6240 if you write the maker ▼

PRESS TOOLS . . Metal and rubber to draw, shear, emboss sheet metal

Source: HYDROPRESS, INC.
576 Lexington Ave., 25th Floor, New York 22, N. Y.



Marform [illegible]

The tools [illegible]

Normal position [illegible]

Bulletin. 12 pages. "Marform the New Metal Forming Process" illustrates and explains the process, outlines its possibilities, presents examples of work that has been handled with costs and comparisons to previous methods, contains representative work pieces, lists equipment and tools available and provides request for additional information.

IEN ON MICROFILM

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All Makers of These And Other Products Are Listed In THOMAS REGISTER — Descriptions — Ratings — See Page 50

▼ SKRIFTT—Identify by IEN-6241 if you write the maker ▼

A NEWS ANNOUNCEMENT BY THE DUFF-NORTON MANUFACTURING COMPANY

JACKS . . . Screw type for wide range of pushing and pulling applications

Source: THE DUFF-NORTON MANUFACTURING CO.
Pittsburgh 30, Pa.

A powerful [illegible]

Duff-Norton Push [illegible]

Available in standard [illegible]

▼ IEN-6242 if you write the maker ▼

Cut Production Costs on small Precision Parts with Atlas 10" Lathes

Handle the work big lathes can't do economically

[illegible]

ATLAS PRESS CO.
[illegible]
SPECIALISTS PRECISION TOOLS FOR WOODWORKING AND METALWORKING

▼ SKRIFTT—Identify by IEN-6243 if you write the maker ▼

KIDDE won't let fire grow

Kidde CO_2 extinguisher smashes fires in seconds. Trigger-finger control makes it simple—just point at the fire and pull. Write for free literature.

Kidde

Walter Kidde & Company, Inc.
756 Main Street, Belleville 9, N. J.

▼ SKRIFTT—Identify by IEN-6244 if you write the maker ▼

G.E. ELECTRIC MIXER BLADES ARE MADE WITH EASY-FLO

Blades of the new G.E. [illegible] EASY-FLO brazed connection, as strong and tough as an integral, cured and economical. With EASY-FLO produced in rack or a press category and a production where that speeds handling and brazing, also [illegible] blades a week [illegible] EASY-FLO joints.

Brazed to specifications from the time given was the EASY-FLO [illegible] which is special for [illegible] with low temperature silver brazing alloy.

GET EASY-FLO DETAILS IN BULLETINS 12-A AND 15

Write for copies today.

HANDY & HARMAN 82 Fulton St., New York 7, N. Y.
[illegible]

IEN-6245

HELPFUL INFORMATION for PUMP USERS

THE INTERNATIONAL NICKEL COMPANY, INC.
73 Wall Street, New York 5, N. Y.

IEN-6246

IEN-6247

IEN-6248

PRINTING .. Typed die cut cards assemble in panel for page printing

Source: REMINGTON RAND INC.
315 Fourth Ave., Room 1616, New York 10, N. Y.

IEN-6249

DRIVE .. Variable pitch sheave changes ratio between two V-belts

Source: AMERICAN TYPE FOUNDERS
202 Elmora Ave., Elizabeth 2, N. J.

IEN-6250

Only Robins Idlers . . . give you these advantages

1. One Shot Lubrication
2. Triple-Grease Seal
3. Rigid Truss Construction

ROBINS IDLERS
ROBINS CONVEYORS DIVISION

IEN-6251

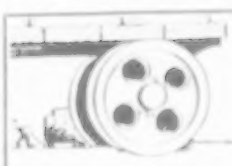
LUBRICATION ECONOMY

LUBRIPLATE LUBRICANTS Cuts Parts Replacements 50%

LUBRIPLATE DIVISION

The Different LUBRICANT!

IEN-6252



IN A Rut?

DON'T LET WORN FLOORS SLOW UP PRODUCTION!

LONE STAR CEMENT CORPORATION

IEN-6253

A TYPE AND SIZE FOR MOST APPLICATIONS

NORMA-HOFFMANN BEARINGS CORPORATION
Precision Ball, Roller and Thrust Bearings
STAMFORD, CONNECTICUT

BRIEFITS—Identify by IEN-6254 if you write the maker

PROPER DESIGN— still the most important ingredient

Design is now advantageous to the use of alloy steels, the shape and proportions of a part are still of more vital significance than its material.

In an economical view, we should rate Design (1) by the choice of the proper steel (2) and its Treatment (3), in that order of importance. All are, of course, matters of great concern, but if the design is wrong then the proper choice of steel and its useful treatment serve no useful purpose.

What is the metallurgical significance of poor design? It promotes unhealthy stress concentrations and troublesome variations in the proportions of adjacent parts.

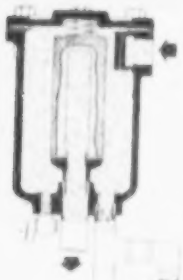
To stress the relationship of good design to metallurgical and economic factors, we have prepared a book helpful to designers, showing by sketches a great many factors in good and poor design which influence the behavior of a part in service.

This booklet sent to you FREE

Climax Molybdenum Company
500 Fifth Avenue · New York City

BRIEFITS—Identify by IEN-6255 if you write the maker

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES

OIL, WATER PIPE SCALE

The Adams Poro-Stone Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation plus diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data. Bulletin 176.

Automatic TRAP

R. P. ADAMS CO., INC.
219 E. Park Dr., Buffalo 17, N. Y.

ADAMS Poro-Stone AIR FILTER

BRIEFITS—Identify by IEN-6256 if you write the maker

CRANE quality fittings for welded pipe lines

LEAKPROOF . . . MAINTENANCE-FREE . . . EASY TO INSTALL

STEEL BUTT-WELDING FITTINGS. Made to standard pipe fittings and specially prepared for welding pipe. Material conforms to physical strength requirements, physical tests, and chemical analysis. A complete line, for pipe sizes from ½ to 24 inch.

STEEL SOCKET-WELDING FITTINGS. Made of high grade carbon steel forgings. Material conforms to physical strength requirements, physical tests, and chemical analysis. Made in sizes up to 4 in. These are socket-welding fittings, ready for rack working, in sizes up to 2 in. Dimensions conform to ASA B16.11 standard, and are interchangeable with other standard fittings.

FORGED STEEL WELDING FLANGES. [illegible]

SEE YOUR NO. 49 CRANE CATALOG

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill. Branches and Wholesalers Serving All Industrial Areas

CRANE

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

INDUSTRIAL EQUIPMENT NEWS

ECA IEN ECA

Publisher — Thomas Publishing Company
Vice-President in Charge — F. Minor Seelye
Editor and Vice-President — W. E. Lenk
Managing Editor — J. W. Moag
Circulation and Reader Service Mgr. — A. J. Granick
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This Issue 65,000 Copies
Printed by Charles Francis Press, New York

Industrial Equipment News (with which is now reporting regularly the data published in 3 of the new industrial developments)

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What's New · EQUIPMENT · PARTS · MATERIALS

Vol. 18 JULY, 1950 No. 7

Comparison

[illegible]

W. E. Lenk.

BRIEFITS—Identify by IEN-6257 if you write the maker

HIGH EFFICIENCY DUST CONTROL with DUCLONE COLLECTORS

- Because each DUCLONE COLLECTOR is factory-made for specific use . . . to proper tolerances to obtain rate of flow and separation relation to air velocity.
- Because is mechanically designed and built to eliminate all destructive eddy currents and resistance to centrifugal action.
- Because only DUCLONE is equipped with inlet control and adjustable vortex shield to give highest performance efficiency.
- Experts engineered . . . simple and sturdy construction . . . assure long, continuous, heavy-duty service.
- A DUCON engineer will gladly confer with you on any dust problem.

Write for descriptive, illustrated catalog DC49-1.

The DUCON Co.
MINEOLA, N. Y.

BRIEFITS—Identify by IEN-6258 if you write the maker

S-A Car Pullers

Save Time, Cut Costs

If you have your own tunnel crack, you can use a S-A Car Puller. No need to use a gang of men or wait for a truck engine. One man can start or stop a car or shared car under normal conditions. Powerful capstan will also roll or lift other heavy loads at 45 feet per minute.

Write for bulletin 1339

STEPHEN S-A ADAMSON

Telleval Bin Level Controls • Car Loaders
SACO Speed Reducers • Car Pullers • Winches
SealMaster Ball Bearings

[illegible]

BRIEFITS—Identify by IEN-6259 if you write the maker

WHEN YOU . . .

Disconnect, You Stop the Flow in Both Ends

Wherever the flow of air, fluids, or gases must be interrupted, Wiggins INST-O-MATIC couplings are lowering costs. Uncouple a Wiggins. You've automatically stopped the flow in both ends. Connecting, or disconnecting, is as simple as switching on a light. Wiggins INST-O-MATIC couplings can increase efficiency in your plant today, and lower costs.

EQUIPMENT MANUFACTURERS

[illegible]

Wiggins

For general or proprietary uses, write for catalog or specific information. E. B. WIGGINS OIL TOOL CO., INC., 3424 E. Olympic Blvd., Los Angeles 23, Calif.

QUICK DISCONNECT
INST-O-MATIC COUPLINGS

IEN - 6260

want your power to speed up?

want your power to slow down?

Do it easily—instantly—with fingertip control, while your machines are running!

LOVEJOY Variable Speed Pulleys

Send for complete catalog. Photos. Diagrams. Data.

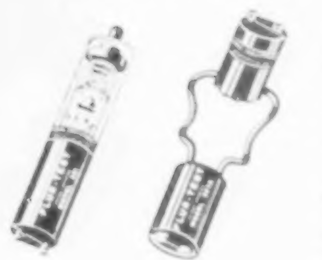
LOVEJOY FLEXIBLE COUPLING CO.

5014 W. LAKE STREET CHICAGO 44, ILLINOIS

IEN - 6263

TESTING . . Glow lamp device for fluorescent fixture maintenance

Source: IDEAL INDUSTRIES INC.
1050 Park Ave., Sycamore, Ill.



IEN - 6264

HONING . . Adjustable head carries stones for external honing

Source: MICROMATIC HONE CORP.
8102 Schoolcraft Ave., Detroit 4, Mich.

Odee HONE

IEN - 6265

HANDLING . . Non-metallic tote boxes to hold work in process and in storage

Source: CONVOY, INC.
Box 216-I, Canton 6, Ohio

Chem Board

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings. See Page 58

IEN - 6267

The New **CHROMALOX** CATALOG 50

Write Today for YOUR Copy!

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

IEN - 6261

GET SERVICE

with

SEALMASTER BALL BEARING UNITS

- PERMANENTLY SEALED
- SELF-ALIGNING
- PRE-LUBRICATED

See for Yourself

Why SEALMASTERS Excel

BEARING DIVISION

STEPHENS-ADAMSON Mfg. Co.

Factory Representatives and Dealers in All Principal Cities

IEN - 6268

Proved— BY YEARS OF USE

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RICHARD BROTHERS DIVISION

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IEN - 6262

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AMERICA'S NO. 1 LOW-COST LONG-LIFE FLOOR COVERING

TAKES THE POUNDING OF MILLIONS OF FEET

PABCO

SEND NOW FOR THE FULL STORY OF MASTIPAVE!

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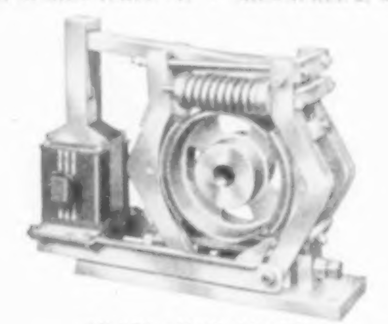
NAME ________ CITY ________

ADDRESS ________ STATE ________

IEN - 6266

TROMBETTA SOLENOID CO.
331 N. MILWAUKEE ST. • MILWAUKEE 2, WIS.



SB-373 SHOE BRAKE
10" WHEEL, 5" FACE, 450 FT.-LBS.

SB-300 LINE OF BRAKES
TORQUE 3 TO 16500 FT.-LBS.

B-100 LINE OF DISK BRAKES
TORQUE 10 TO 25000 FT.-LBS.

EIGHT LINES OF SOLENOIDS
RECIPROMOTORS AND SEMOTORS

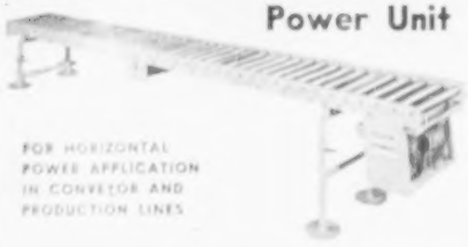
IEN - 6269

ALLIS-CHALMERS, 909A, SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS

IEN-6270

METZGAR "LIVE-ROLLER" Power Unit



FOR HORIZONTAL POWER APPLICATION IN CONVEYOR AND PRODUCTION LINES

They are offered in various lengths and are readily adjustable for height.

For economy in power units, your best buy is a Metzgar.

MORE DURABLE THAN BELT TYPE

PERMANENT OR PORTABLE BASE

METZGAR CO.
417 Douglas St. N. W.
GRAND RAPIDS 4, MICH.

IEN-6273

REFRIGERATING . . Freon condenser, evaporative design, 10 to 50 ton

Source: NIAGARA BLOWER CO.
3117 Chrysler bldg., New York 17, N. Y.

Freon ...

Galvanized steel ...

IEN-6276

PUMPS . . . Peerless Type A Centrifugal, for capacities to 70,000 gpm, heads to 300 ft.

Available from PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION

IEN-6271

ARTICULATED TROLLEYS *make possible* high-speed heavy-service AMERICAN MONORAIL CRANES

When each trolley wheel carries its share of the load in perfect alignment with the craneway tracks and all possible friction is eliminated, the result is perfectly articulated trolley travel.

Applied to American MonoRail Cranes, these articulated trolleys permit operating speeds of 500 feet per minute ... constant service ... handling loads up to 10 tons. And with this is offered all the flexibility of MonoRail design for *interlocking carrier service between and beyond the craneways.*

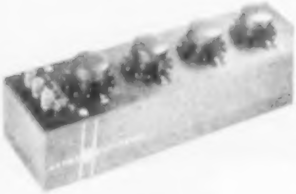
Write for complete information

THE AMERICAN MONORAIL COMPANY
13111 Athens Avenue • Cleveland 7, Ohio

IEN-6274

TESTING . . Resistor decades in four and five dial box assemblies

Source: LEEDS & NORTHRUP CO.
4934 Stenton Ave., Philadelphia 44, Pa.



The boxes ...

IEN-6277

RAMSEY Flexible COUPLINGS

Available in two designs

STRAIGHT TYPE

DIAGONAL TYPE

Protective aluminum covers available for both types. Write for literature giving dimensions, capacities, list prices, etc.

RAMSEY CHAIN COMPANY, INC.
5052 BROADWAY, ALBANY, N. Y.

IEN-6272

For bronze bearings and bushings . . .

THIS BRONZE ALLOY IS JUST WHAT YOU'RE LOOKING FOR!

N-B-M "Tiger" Bronze is the ONE bronze alloy with ALL these features:

Wear-Resistant ...

Anti-Frictional ...

Shock Resistant, Embeddable ...

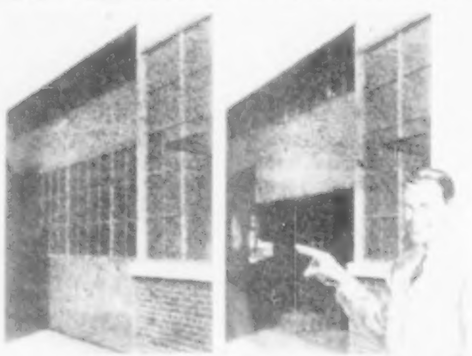
Easy To Machine ...

All Popular Sizes ...

Brake Shoe — NATIONAL BEARING DIVISION

IEN-6275

Truscon Vertical Lift Steel Doors

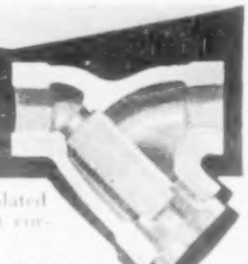


QUICK QUIET . . . FOR SMALL OR BIG OPENINGS

TRUSCON STEEL COMPANY
YOUNGSTOWN 1, OHIO

IEN-6278

A Better STRAINER



- *BODY*—Is cadmium-plated for protection against corrosion.
- *SCREEN*—High-grade monel wire basket.
- *SCREEN CAP*—Easily removed. Machined face and spark-plug-type gasket provide tight joint. Cap and screen come out together. Screen automatically aligns when replaced.
- *SIX SIZES*, ½" to 2", for pressures up to 600 lbs. Reasonably priced.

- Many Thousands in Service
- Sold by nearly 150 Mill Supply Houses

YARNALL-WARING COMPANY
122 Mermaid Ave., Philadelphia 18, Pa.

YARWAY STRAINERS

IEN-6279

Ledeen CYLINDERS IMPROVE THE JOB

Their USES, FEATURES, SELECTION, MOUNTING, and APPLICATION

Discussed in New Bulletin 500

Write for your copy Today!

Ledeen cylinders are good cylinders!

Ledeen Mfg. Co.
1602 San Pedro St. Los Angeles 15, Calif.

IEN-6280

AN AXE TO GRIND?

"U. S." Engineers can develop grinding wheels that exactly fit your particular problem

FROM SLABS TO SAUCEPANS

U.S. RUBBER SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

IEN-6281

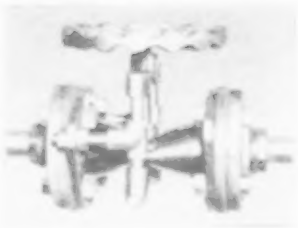
10 POWER MACHINES IN ONE!

DE WALT INC.

IEN-6282

VALVE . . Rubber pinch design for line shutoff, 1½ to 12 in. sizes

Source: UNITED STATES RUBBER CO.
1230-32 Sixth Ave., New York 20, N. Y.



The rubber body

Application

IEN-6283

CLEANING . . Powdered material removes ink, paint, grime from hands

Source: C. B. DOLGE CO.
12-16 Welton Road, Westport, Conn.

Charge is cancelled if unsatisfactory

Value

IEN-6284

ROCK DRILLING . . Hydraulic machine drives drill and impact bolt wrench

Source: BAKER-RAULANG CO.
1248-52 W. 80th St., Cleveland 2, Ohio

New machine

IEN-6285

IEN-6286

PICK THERMOCOUPLES FROM TABLES!

LEEDS & NORTHRUP COMPANY 4901 STENTON AVE., PHILA. 44, PA.

LEEDS & NORTHRUP

IEN-6287

SAVING FACTS... for You!

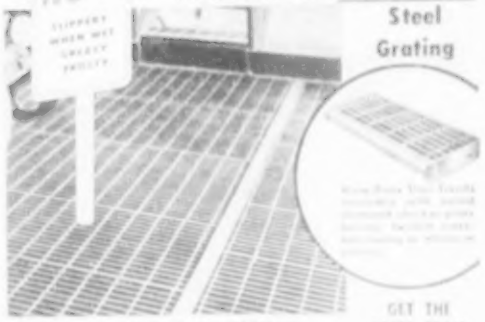
Here is a new book which is sure to be of interest. It's crammed full of facts and details on Baldwin-Rex DOUBLE PITCH ROLLER CHAIN. This chain offers superior wear resisting and weight saving advantages in both drive and conveyor service. In the proper application, it can save you real money.

Write for your free copy today using coupon below.

BALDWIN-REX ROLLER CHAINS

IEN-6288

Because it's BLAW-KNOX "TWISTED BAR" Electroforged Steel Grating



GET THE FACTS FROM BULLETIN 2296

BLAW-KNOX DIVISION of Blaw-Knox Company
2050 Farmers Bank Bldg., Pittsburgh 22, Pa.

BLAW-KNOX ELECTROFORGED STEEL GRATING

BREFITT—Identify by IEN-6289 if you write the maker

You Will Know what makes PRY TRUCKS so popular

When you see them working

You will be surprised at the amount of heavy cores, crates, die blocks or any kind of big loads two men can move with Thomas Pry Trucks. Even with only one man the work production is amazing, although purchase in pairs is recommended.

The sharp steel nose slider under the load and the tremendous leverage enables the user to easily raise the load as high as 9" from the floor. Sketches show how Pry Trucks can be used to move load and how by raising the load, rollers or dollies can be placed under it.

Operator does not carry any weight but balances load with minimum of effort.

Write for catalog PT.

THOMAS TRUCK & CASTER CO.
125 Mississippi River
Keokuk, Iowa

BREFITT—Identify by IEN-6290 if you write the maker

STOP DUSTS

. . . with low cost, unit-type DUSTKOPS
They're Ductless . . . quickly installed

250 cfm to 3600 cfm

½ hp. to 5 hp.

Immediate shipment from stock means immediate stopping of dust, lint, dirt, shavings, etc.

For the least costly dust collecting method describe your problem. No obligation.

AGET-DETROIT COMPANY
Ann Arbor, Michigan

BREFITT—Identify by IEN-6291 if you write the maker

HOOKS, TONGS GRIPS and SLINGS

SPEED UP HANDLING SAFELY!

DOWNS CRANE & HOIST CO.
MECHANICAL ENGINEERS
340 W. VERNON AVENUE
LOS ANGELES 37, CALIF.

BREFITT—Identify by IEN-6292 if you write the maker

FOUNDRIES . . Molding machine handles drag and cope molds separately

Source: SPO INC.
6450-54 Grand Division Ave., Cleveland 5, Ohio

Mold-O-Matic (right-hand) new machine in the assembly shows with a roll-over mechanism for drag molds. It will handle cope molds when this mechanism is omitted. The assemblies are intended for partial installation in handle flasks measuring from 12 by 18 to 36 by 48 inches. Sizes over taken 14 to 20 in. flasks. It has a 1,000-lb. operated lift mechanism, a 20,000-lb. squeeze and an 8,000 draw. Operation is on with air pressure from a step row with control centering at pushbutton and manual valves. Production rates 300 drag molds per hour.

Empty flasks feed over a wooden roller conveyor from the left as the machine is illustrated. They arrive one at a time at a strip frame which is positioned over the pattern. This frame comes down to the pattern and then sand is charged from a metering box previously filled from an overhead hopper. The filled flask is given a predetermined jolt to compact the sand. Then as the metering box automatically returns to refill and pick up another flask, the handle-operated squeeze head positions over the filled mold and the squeeze operation is completed. This is followed by stripping pressure for the drag mold and discharge to the right.

BREFITT—Identify by IEN-6293 if you write the maker

GAGE . . Dial indicator design checks diameter of internal grooves

Source: NILSSON GAGE CO.
4-A Lake St., Poughkeepsie, N. Y.

The nose of this new dial-indicator gage and index gage consists of a stationary upper extension with a sliding pin set between two pressure of a spring plunger and a movable lower extension with a fixed spring, lower and movement are sensed by a gage.

Pulling the trigger permits insertion into a bore. Releasing it lets the spring pushes take the proper position to register size or make deviation from or within nominal setting.

Applications include checking diameters of grooves and recesses to take retaining rings of the Waldes Kohinoor Truarc type, ordinary retaining rings, O-rings, washers, oil grooves, ball races. Two body sizes take various extensions to cover an overall diameter range from .524 to 5.290 inches. Nilsson Dial Bore Gage is the designation.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 53

BREFITT—Identify by IEN-6294 if you write the maker

Speed up
HANDLING

WAYNE LOADING DOCK LIFTS

Save time and money with Wayne Hydraulic Leveling Ramps to adjust the level of the loading deck to the truck bed. Platform automatically adjusts itself. Material can be directly transported into and out of truck. Eliminates breakage and accidents. Cuts loading time in half.

THE WAYNE PUMP COMPANY
311 TECUMSEH STREET, FORT WAYNE 4, IND.

NATIONWIDE SERVICE

BREFITT—Identify by IEN-6295 if you write the maker

NEW! LOW PRICED PRECISION MADE MULTI-PURPOSE CAM PRESS

• The perfect hand tool for punching, riveting, forming, riding, spotting, bending, drawing, staking, molding, assembling.

This sturdy press provides accuracy not obtainable with ordinary arbor press. Ideal for small parts production jobs.

Write today for special bulletin.

Bed	3¾" x 4"
Die Space—Stroke up	4¼"
Length of Stroke	¾"
Capacity	1½ ton

PRICE ONLY
$42.00 F. O. B.
Marshalltown

MARSHALLTOWN MANUFACTURING CO.
MARSHALLTOWN, IOWA

BREFITT—Identify by IEN-6296 if you write the maker

Speed Production . . . . Cut Fabrication Costs

With this Low-Priced Oxy-Acetylene Cutting Machine OXWELD CM-30

The Oxweld CM-30 Portable Cutting Machine is for cutting straight lines and bevels on metals up to 4 in. thick. It also will cut circles from 2½" to 96 in. in diameter, and can be hand guided for simple shapes.

Convenient to Use

The CM-30 can be operated either on lightweight track for straight-line cutting, or on the work itself for cutting circles.

Write for a descriptive folder.

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation
30 E. 42nd St., New York 17, N. Y. UCC Offices in Other Principal Cities
In Canada: Dominion Oxygen Company, Limited, Toronto

BREFITT—Identify by IEN-6297 if you write the maker

ELECTRIC HOISTS . . . with a wide range of usefulness

The SPEEDWAY line of electric hoists includes models for practically any application up to 10 ton capacity. Motors, all built to NEMA specifications, are interchangeable. Cable drums are grooved. Cables are of Preformed wire rope with fittings securely swaged on. Gears of alloy steel, heat-treated and hardened. Mountings available: base, lug, hook, plain geared, motor-driven or close headroom trolley. Write for bulletin of specifications, DH-65.

WRIGHT HOIST DIVISION
American Chain & Cable
York, Pa.

IEN-6298

Parker-Kalon GROUND THREAD Socket Set Screws

SET RIGHT with SHOP MEN

RIGHT START

RIGHT FINISH

RIGHT FIT

RIGHT BUY

SEE FOR YOURSELF!

P-K

PARKER-KALON

cold forged

SOCKET SCREWS

IEN-6299

THIS NEW CATALOG-

has all the Answers-

to Your PRODUCTION SCREWDRIVING PROBLEMS

Model B Detroit Power Screwdriver

MOTORIZED HOPPER UNITS

Mail Coupon for Catalog

DETROIT POWER SCREWDRIVER CO.

2813 West Fort St., Detroit 16, Michigan

Yes, send along your new catalog . . . sounds interesting

COMPANY NAME

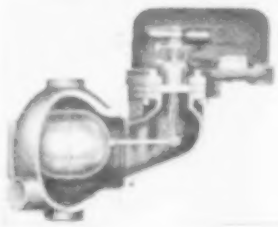
STREET ADDRESS

CITY STATE

IEN-6301

CONTROL . . Float operated switch actuates circuit on liquid level change

Source: McDONNELL & MILLER
3502 N. Spaulding Ave., Chicago 18, Ill.



IEN-6302

SEALING . . Cork filled paper for gaskets, 1/64 to 1/8 in. thickness

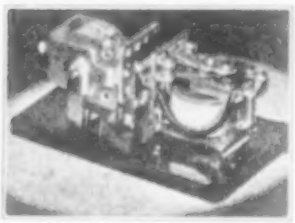
Source: FIBREFLEX PACKING & MFG. CO.
P. O. Box 4646, Philadelphia 27, Pa.

Sample available upon request

IEN-6303

RELAY . . Latching design opens circuit on momentary contact

Source: LEACH RELAY CO.
5913-17 Avalon Blvd., Los Angeles 3, Calif.



All Makers of These And All Other Products Are Listed In THOMAS REGISTER . . Descriptions . . Ratings . . See Page M

IEN-6304

For Quick, Efficient On-Location Clamping Use Knu-Vise Portable Vises

F-400

FGP-400

F-1200

Whether you clamp big parts requiring pressures of a few pounds or want to hold together huge assemblies that need pressures of around 1000 pounds, Knu-Vise Toggle-action pliers will give you the dependable service you need. Made to meet exacting specifications resulting from extensive research. Tools and years of practical use among leading industries.

SPECIAL MODELS ON REQUEST

Ask for complete catalog

Consult us direct or our representative engineer near you

KNU-VISE PRODUCTS LAPEER MFG. CO.

3056 DAVISON ROAD • LAPEER, MICHIGAN

Western Division
[illegible]
Chicago, Calif.

Detroit Sales Distributor
[illegible]
Detroit, Mich.

IEN-6305

New report on savings with centralized lubrication

YOURS for the asking

FOR more than 20 years Farval has been saving money for users. Through efficiency, increased plant production of machinery, reduced equipment costs, Farval saves a world. It saves cutting labor, it saves lubricant, it reduces bearing expense, it eliminates downtime.

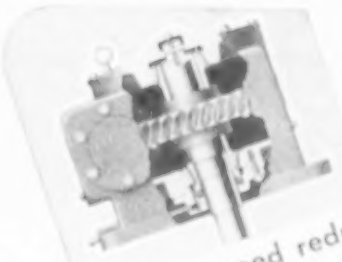
The Farval System is a positive mechanical method of delivering oil or grease under pressure to a grease bearing. Farval Centralized Lubrication is easily installed, is easy to maintain, is always in demand. It consists of a central pumping unit, two main supply lines and a measuring valve for each bearing.

Catalog No. 25 and "Farval Systems" give complete facts and figures. The Farval Corporation, 5258 East 80th Street, Cleveland 5, Ohio.

FARVAL

CENTRALIZED SYSTEMS OF LUBRICATION

IEN-6306



Type ND with drive shaft down

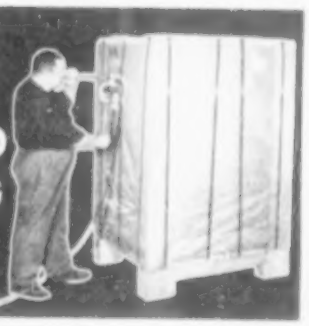
A new vertical speed reducer to drive agitators and mixers

WRITE

CLEVELAND Worm Gear Speed Reducers

IEN-6307

NEW HIGH SPEED STRAPPING TOOL



Here's the most advanced "1" automatic steel band strapping tool on the market—Signode's "A-1." Simple and fast. Tightened steel band equipment itself built for strapping. Automatic seal and sever strapping to one smooth continuous operation. Magazine holds 1 coil (20 lbs.) for quick loading. Tool can be operated at any point for operating ease, for reduction of "trap" labor, for productive strapping of heavy cargo—anywhere.

FOR FULL DETAILS—MAIL COUPON

Signode Steel Strapping Co.
[illegible]

Please send me complete information on Signode "A-1" Automatic Steel Band Tool and Tightener and other products of Signode for strapping.

Name Title

Company

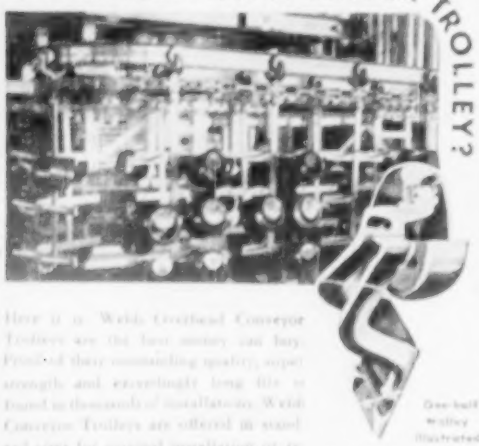
Address

City State

THIS SEAL MEANS SECURITY IN SHIPPING

BRIEFITT—Identify by IEN-6308 if you write this maker

LOOKING FOR A BETTER TROLLEY?



One-half Trolley Illustrated

Here it is. Webb Overhead Conveyor Trolleys are the best money can buy. Proved by their outstanding quality, super strength and exceedingly long life as found in thousands of installations. Webb Concrete Trolleys are offered in stock and sizes for original installation or replacement. Webb dependability is a tradition backed by over 50 years experience.

JENNIE B. WEBB COMPANY

OFFICES IN PRINCIPAL CITIES
8915 ALPINE AVE.
DETROIT 4, MICH.

MANUFACTURERS OF OVERHEAD AND FLOOR TYPE CONVEYORS • • •

BRIEFITT—Identify by IEN-6309 if you write this maker

Wagner steel-frame drip-proof polyphase motors have been proved durable, dependable, and maintenance-free under years of hard usage in industry after industry.

These open-type squirrel-cage motors are available through fifty frame size, with other sizes to fold heritage. The motor frames are formed of heavy rolled steel, shaped to accurately center the stator core and to provide passages for adequate ventilation. Because there are no openings in the frame, these motors are completely drip-proof when mounted on the normal horizontal position, and by turning the end-plates are still drip-proof in the vertical or ceiling horizontal positions.

Wagner Electric Corporation

Send for Bulletins

6414 PLYMOUTH AVENUE
ST. LOUIS 14, MO.

ELECTRICAL EQUIPMENT AND AUTOMOTIVE BRAKE PRODUCTS

BRIEFITT—Identify by IEN-6310 if you write this maker

DESIGN FEATURES that mean BETTER HEATING of FLUIDS

WATLOW IMMERSION UNITS

Send for the Watlow Electric Heating Units Catalog

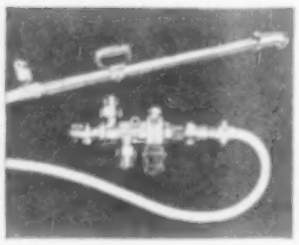
SPECIALISTS IN ELECTRIC HEATING UNITS

WATLOW
ELECTRIC MANUFACTURING COMPANY
1310 N. 23d St. St. Louis 6, Mo.

BRIEFITT—Identify by IEN-6311 if you write this maker

CLEANING . . Hot water jet equipment injector operated, pressure to 350 lb.

Source: SELLERS INJECTOR CORP
1615 Hamilton St., Philadelphia 30, Pa.



Type B [illegible]

The injector [illegible]

BRIEFITT—Identify by IEN-6312 if you write this maker

DRILLING . . Motor driven head with pneumatic feed, hydraulic control

Source: DELTA MFG. DIVISION
614 E. Vienna Ave., Milwaukee 1, Wis.

Three assemblies [illegible]

Spindle travel [illegible]

Bulletin, "An Hydraulic Drill Unit", [illegible]

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER Descriptions Ratings See Page 50

BRIEFITT—Identify by IEN-6313 if you write this maker

NEW CATALOG featuring
Heat Absorbing and Glare Reducing
COOLITE Glass for Industrial Buildings

Send For Your FREE Copy Today!
No obligation of course. Write

MISSISSIPPI Glass COMPANY
SAINT LOUIS 7, MO.
NEW YORK • CHICAGO • FULLERTON, CALIF.
World's Largest Manufacturers of Solid, Figured and Wired Glass

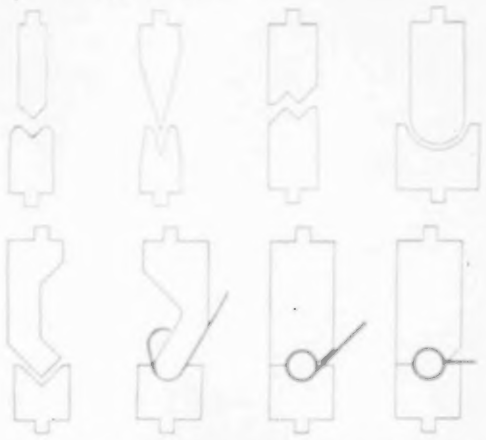
BRIEFITT—Identify by IEN-6314 if you write this maker

PRESS BRAKE FORMING DIES

PROMPT DELIVERY

Any metal—any gage—to fit any make of machine

Here are a few examples:



RAFTER MACHINE COMPANY, INC.
SINCE 1[illegible]

249 Stephens Street Belleville 9, N. J.

COLD ROLL FORMING MACHINES
AND GANG SLITTERS

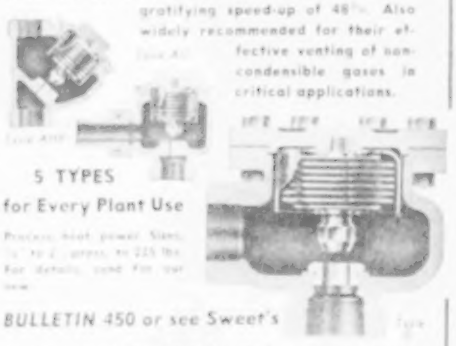
BRIEFITT—Identify by IEN-6315 if you write this maker

Nicholson Traps

UP STEAM FLOW 50%

for Leading Processor

A striking increase in steam flow from 2000 to 3000 lbs. an hour is reported by a chemical maker who recently replaced a mechanical trap with Nicholsons. This cut cooking time from 105 to 55 min., a gratifying speed-up of 48%. Also widely recommended for their effective venting of non-condensible gases in critical applications.



5 TYPES
for Every Plant Use

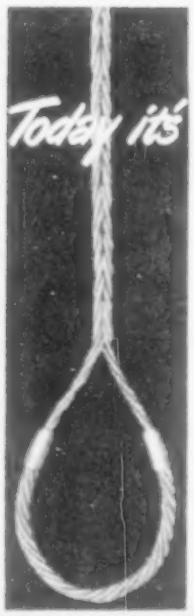
Pressure, heat, power. Sizes, ½" to 2", press. to 225 lbs. For details, send for our new

BULLETIN 450 or see Sweet's

W. H. NICHOLSON & CO.
[illegible] STREET
[illegible], PA.

Sales and Engineering Offices in 33 Principal Cities

BRIEFITT—Identify by IEN-6316 if you write this maker



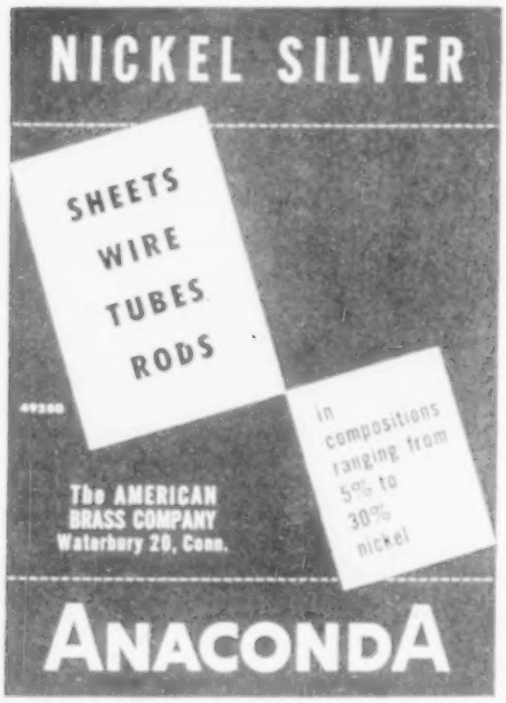
TO LIFT LOADS
FASTER—CHEAPER—
Today it's Roebling!

ROEBLING
"FLATWEAVE" SLINGS

Six 12 ply [illegible]

ROEBLING
A CENTURY OF CONFIDENCE

IEN-6317



IEN-6318

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

IEN-6319

Why
ALCO-LITE Type 400
is the right ladder for you

ALCO-LITE ALUMINUM LADDERS
ALUMINUM LADDER COMPANY
100 CARRIE STREET • WORTHINGTON, PENNA.

IEN-6320

METER . . Hook-on wattmeter, readings are from 3 to 300 kilowatts

Source: GENERAL ELECTRIC CO.
Dept. 6X-201, Schenectady 5, N. Y.

IEN-6321

STEEL . . Chromium plated rod can be bent, formed, welded, swaged

Source: KENMORE METALS CORP.
179-82 Ninth St., Jersey City 2, N. J.

Commercial lengths specified plating

IEN-6322

TESTING . . Moisture meter reads per cent in wood and plaster

Source: WESTON ELECTRICAL INSTRUMENT CORP.
612-16 Frelinghuysen Ave., Newark 5, N. J.

IEN-6323

SAFETY EQUIPMENT FOR ALL INDUSTRIES
IPCO M & M RAIL CLAMPS
Used for car stops, on loading platforms, freight cars siding, cars on grades and turning rooms.

THIS
The Dangerous Way

OR THIS
THE SAFE WAY

Used and recommended by leading Steel Companies, Manufacturing Plants, Mines, Grain Elevators, Cement Plants and Quarries.

IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2801 N. FOURTH STREET • PHILADELPHIA 33, PA.

IEN-6324

Quick way to save money on cartons!

PALMER

Continuous Motion
CARTON FORMER

PALMER DIVISION
PACKAGE MACHINERY COMPANY
SPRINGFIELD 7, MASSACHUSETTS
NEW YORK CHICAGO BOSTON CLEVELAND ATLANTA DALLAS
DENVER LOS ANGELES SAN FRANCISCO SEATTLE TORONTO MEXICO, D.F.

IEN-6325

Higher Unit-Space Rating

and extra strength

WARD LEONARD ELECTRIC CO.
Rheostats-Regulators-Controls
RESISTORS • RHEOSTATS • RELAYS • CONTROL DEVICES

IEN-6326

GENERAL PURPOSE
Plugs and Receptacles
For Portable Electrical Equipment

CONDUIT FITTINGS • FLOODLIGHTS
THE PYLE-NATIONAL COMPANY
1335 NORTH KOSTNER AVENUE, CHICAGO 51, ILLINOIS

BREVITY—Identify by IEN - 6327 if you write the maker

Stanley-Carter 218 Router

This full horsepower, 18,000 r.p.m. Router has a spot in every shop . . . for pattern work, production and construction. Used with Stanley Carter high speed bits it saves time . . . cuts costs. For special applications, tungsten carbide tipped bits can be furnished. Router is equipped with oversize oil sealed bearings. Rubberoid design keeps out dust. More useful for more years. See your dealer or write to Editor, Stanley Electric Tools, 306 Myrtle St., New Britain, Conn.

STANLEY

Reg. U.S. Pat. Off.

Hardware • Tools • Electric Tools • Steel Strapping • Steel

BREVITY—Identify by IEN - 6328 if you write the maker

KEY-TITE Water, gas, low-pressure steam and compressed air lines are completely sealed when you use KEY-TITE. This lead-free compound does not affect taste or odor of potable liquids.

KEY GRAPHITE PASTE Oil gasoline, kerosene and high-pressure steam lines require the perfect seal provided by KEY GRAPHITE PASTE. With KEY, pipe joints are sealed and lubricated at the same time.

Pipe joints and fittings sealed with Key Pipe Joint sealing compounds do not leak. Compounds will not harden and expanding at cold.

There is a Key compound to fit your pipe joint sealing requirements. Send for free sample.

KEY Company

KEY COMPANY
3201 McCausland Ave.
East St. Louis, Ill.

BREVITY—Identify by IEN - 6329 if you write the maker

Reduce Machine Noise and Vibration 60%-85%!

ANCHOR MACHINES ON UNISORB*

Yes, and UNISORB machine-mounting requires no holes . . . no lag screws . . . no destructive floor-drilling. It's the modern way to anchor machines . . . saves installation costs . . . lasts for years and years with no maintenance . . . easy to replace . . . prevents vibration damage to floors, buildings and machinery.

Today, write for your free copy of "Why It Pays To Anchor Your Machines with UNISORB."

The FELTERS Company
210-1 SOUTH STREET
BOSTON 11, MASS.

BREVITY—Identify by IEN - 6330 if you write the maker

PRESS . . Open back inclinable, mounts on a bench, has 4 ton rating

Source: KENCO MFG. CO.
5209-13 Telegraph Rd., Los Angeles 22, Calif.

Operation . . . [illegible]

Construction . . . [illegible] in the 50% flywheel, a one-piece horizontal steel flywheel molding and shaft. V-type rain guides are hardened and ground, a built in knockout, and an adjustable motor bracket. The trip mechanism is a new design for single-stroke presses operation. There is provision for convertibility to continuous repeat action. List price without the motor is $185. A swivel base sells $19.75. An 8-in. rotary table adds $75.

BREVITY—Identify by IEN - 6331 if you write the maker

FILTERING . . Filter fabric made of spun staple Vinyon-N fabric

Source: FILTRATION ENGINEERS INC.
153-57 Oraton St., Newark 4, N. J.

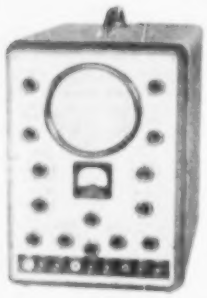
Sample available upon request

Eron Etnel is a new chemical resistant fabric for use in press-type liquid filters. It is suited for use with hot acids, with alkaline organic solvents. It can be cleaned easily, is non-bleeding and has a considerably longer service life than filter cloth made of cotton, wool and staple rayon or synthetics.

BREVITY—Identify by IEN - 6332 if you write the maker

TESTING . . Oscilloscope for general use has 5 in. screen

Source: TRIPLETT ELECTRICAL INSTRUMENT CO.
11-15 Harmon Drive, Bluffton, Ohio

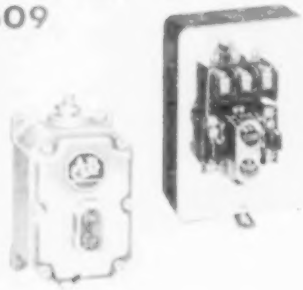


Model 3110 oscilloscope is new arrangement of the cathode-ray tube with a battery-operated electrically calibrated meter for peak-to-peak voltage measurements built in switch to eliminate the between a calibrated voltage and a measured voltage. Equipment can be supplied for [illegible] a new dual [illegible] Frequency range is 20 [illegible] 1 [illegible] Linear sweep [illegible] 10 kc.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . . Instantaneous . . . Ratings . . . See Page 50

BREVITY—Identify by IEN - 6333 if you write the maker

Bulletin 609 Manual Starters



- Silver alloy contacts need no maintenance
- Generous wiring space is white inside

An Allen-Bradley Bulletin 609 across-the-line starter saves maintenance time on any machine. Contacts never need cleaning, filing, or dressing . . . they're always ready for action. Strongly built for years and years of trouble-free operation. Thermal breakers provide reliable motor overload protection. Allen-Bradley Co., 1312 S. Second St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

BREVITY—Identify by IEN - 6334 if you write the maker

SYNTRON

"Vibra-Flow"

VIBRATORY FEEDERS

Speed Up Your Material Handling

Variable Control of Material Flow

No Moving, Wearing Mechanical Parts

Syntron Vibratory Feeders will smooth out those surges in your materials handling line. They provide a constant, controlled flow of bulk materials that can be regulated to meet the capacity of other processing machinery.

Write for catalog data

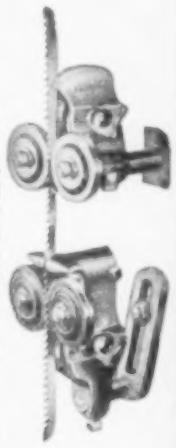
SYNTRON CO., 410 Lexington, Homer City, Pa.

BREVITY—Identify by IEN - 6335 if you write the maker

MORE SPEED MORE SUPPORT

SAVE MONEY

PADDOCK BALL-BEARING BAND-SAW GUIDES



Here's a low cost way to reduce Blade Breakage — enable old or new Band Saws to cut more material — protect workmen! PADDOCK GUIDES hold working portion of blade as if in a frame! Ball bearing wheels turning with the blade give friction-free support! Wheels are interchangeable for balanced wear and longer life. Write for circulars — and prices!

PADDOCK TOOL CO.
Guide Makers Since 1920
1418 Walnut Street, Kansas City 6, Mo.

Paddock
BALL-BEARING
BAND SAW GUIDES

BREVITY—Identify by IEN - 6336 if you write the maker

STOP PIPE LEAKS POSITIVELY

Quick fix on the job is the best of pipe leak stop tools.

IT'S QUICK. [illegible]

AMAZINGLY STRONG. Made of [illegible] for strength and permanent resistance to [illegible] to 400 p.s.i.

PERMANENT. [illegible] the Patchmaster pad and clamp is [illegible] for [illegible] and will [illegible] against the pipe.

HIGHLY ECONOMICAL. [illegible]

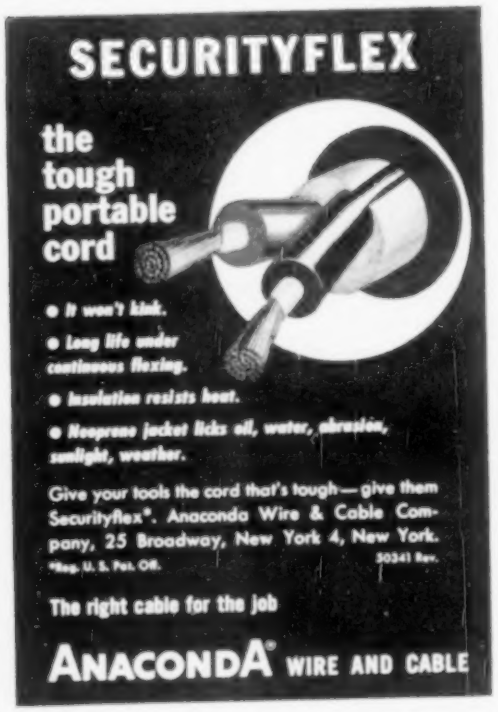
4 SIZES FOR ALL PIPE FROM ½ TO 4 INCHES

For information and literature on Marman products write or phone leak clamps with Dept. J-5.

MARMAN PRODUCTS CO. INC.
940 W. FLORENCE AVE., INGLEWOOD, CALIF.

BREFITT—Identify by IEN - 6337 if you write the maker

BREFITT—Identify by IEN - 6338 if you write the maker



BREFITT—Identify by IEN - 6339 if you write the maker

BREFITT—Identify by IEN - 6340 if you write the maker

METER . . Replacement stuffing box for company's orifice type flow meter

Source: PITTSBURGH EQUITABLE METER DIV.
402 N. Lexington Ave., Pittsburgh 8, Pa.

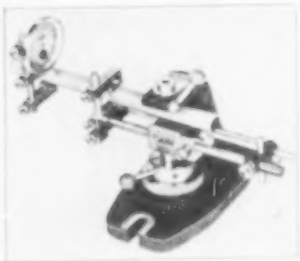
Both sealing and bearing [illegible]

The cylindrical assembly [illegible]

BREFITT—Identify by IEN - 6341 if you write the maker

DRILLING . . Adjustable fixture positions and holds work at a machine

Source: COSA CORP.
5002 Chrysler Bldg., New York 17, N. Y.



Work pieces that [illegible] Capacity. For [illegible] work is to 1½" in diameter in the upward or the [illegible] under the head carrying the interchangeable drill bushing. A series of the fixtures is available for holes to 6½" in diameter.

A part of the clamp assembly is a swinging clamp that swings to the work to the left of the drilling location. This clamp holds work location and can be set to square holes as required in axial direction. A second accessory part is the pendulum-type lever or angle gage used to the work near the left-hand end. This unit is employed for more settings to position holes radially for drilling in the work.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 50

BREFITT—Identify by IEN - 6342 if you write the maker

BREFITT—Identify by IEN - 6343 if you write the maker

2-speed automatic TRANSMISSION

. . used to supplement constant-speed and multi-speed motors . .

. . . with the advantages of providing broader ranges of speeds and special ratios not obtainable electrically . . . In the Two-Speedmaster [illustrated] model, with a 1750 rpm input speed, the low-end of reduction is 6.31 to 1 for any preselected ratio. Input direct motor speed to this low-end is [illegible] . . . WESTERN Two-Speed Automatic Transmissions are built to handle 5, 10, 15, 20, 25 and up to 50 horsepower motors . . . *Send for complete information.*

up to 50 h. p.
WESTERN TRANSMISSIONS
WESTERN MANUFACTURING CO. — LOS ANGELES — DETROIT

BREFITT—Identify by IEN - 6344 if you write the maker

Applies sales appeal to stainless steel ... *Automatically*

RICH, lustrous finishes . . . the silent salesmen that highlight customer preference for your products . . . are now produced automatically, using Osborn Power Brushes.

Shown above are typical cut and color operations at the plant of a leading producer of pocketed and plated parts for the automotive and appliance industries. Four parts formed from stainless steel are fed on an endless belt under rotating brush equipped with Osborn Roll-Finishes® using abrasive compound. High finishes on these parts are now produced with a maximum of handling . . . at a minimum of cost.

When you permit machine steel, cold rolled steel or other metal products OBA (Osborn Brushing Analysis) may show you how to improve the quality of your work, increase your production, and automate repetitive work with power brushing. The services of the Osborn Brushing Analysis are all free, and your finishing and cleaning problems are backed by Osborn's experience behind hundreds of installations and are yours for the asking. Simply write *The Osborn Manufacturing Company Dept. IEN, 5401 Hamilton Avenue, Cleveland 14, Ohio.*

CAN YOU IMPROVE YOUR FINISHES AND CUT COSTS BY BRUSHING?

LOOK FOR THE NAME OSBORN RECOGNIZED EVERYWHERE FOR PROGRESS IN FINISHING METHODS

▼ BREVITY—Identify by IEN - 6346 if you write the maker ▼

DRAINAGE WATER PROBLEMS SOLVED

For the very best type of insurance against costly damage often caused by unexpected seepage or drainage water . . . you can depend upon the ruggedly built Taber Sump Pump.

With an 18" terra cotta tile to form the collecting basin a Taber Sump Pump is very definite protection, economical, efficient. Also built in capacities up to 250 g.p.m.

Write for Complete
BULLETIN S-135

Please use business letterhead when requesting Bulletin. Taber Pump Co., 268 Elm St., Buffalo 3, N. Y.

Est. 1859

[illegible table]

TABER SUMP PUMP

▼ BREVITY—Identify by IEN - 6347 if you write the maker ▼

INCREASE VOLUME, MECHANIZE YOUR PRODUCTION

Illustration shows J-T Electric Vibrating Feeder (with absolute control over tonnage handled) feeding parts to Jeffrey Steel Apron Conveyor.

YOU can put your problem of mechanization for profit squarely in our hands. We have had years of experience . . . have installed some of the largest handling jobs in the world . . . have a complete line of modern and improved machinery from which to choose. Jeffrey will work with you . . . and for you.

JEFFREY
THE JEFFREY MANUFACTURING CO.
914 N. Fourth Street Columbus 16, Ohio

▼ BREVITY—Identify by IEN - 6348 if you write the maker ▼

BIN-FLO

Provides STEADY FLOW of Bulk Materials

New aerating device provides uniform steady flow of most dry finely ground materials from bins, hoppers, chutes, and silos.

BIN-FLO units are located at points of restricted flow. Low pressure air supply may be controlled by BIN-DICATORS.

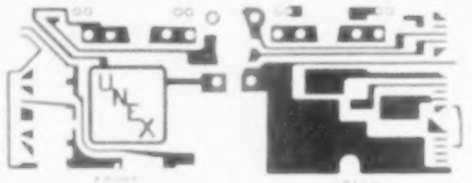
THE BIN-DICATOR COMPANY
13946 Kercheval Avenue Detroit 15, Michigan

Please send me new 20-page catalog giving complete information and specifications on BIN-DICATORS. Also please send information on BIN-FLO Aerating Units.
Name
Address
City State

▼ BREVITY—Identify by IEN - 6349 if you write the maker ▼

ELECTRIC CIRCUITS . . Conductor bonded to base in specified outline

Source: EMELOID CO.
1237-41 Central Ave., Hillside, N. J.



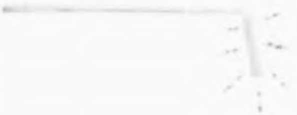
Both sides of a rigid plastic sheet can be inlaid with copper to form a specified electric circuit or multiple circuit assembly in new design of the company's Printed Circuits previously described [illegible]. The plastic is about [illegible] in. in thickness; can be Bakelite, Vinylite, Polystyrene. Copper thickness is .001 to .005 inch.

The surface of the copper is flush with the plastic surface and can be supplied dull or burnished. Applications in which the copper is on the surface, not inlaid, can be specified. The company is prepared to supply printed circuits on panels measuring from [illegible] to 12 by 18 inches.

▼ BREVITY—Identify by IEN - 6350 if you write the maker ▼

RETRIEVING . . Permanent magnet adjustably mounted on extension arm

Source: HERBRAND DIV.
1009-13 Stone St., Fremont, Ohio



Ferrous objects weighing as much as [illegible] lb. can be picked up by this new permanent magnet retrieving tool. It consists of the magnet head measuring [illegible] in. and the supporting arm which extends between [illegible] and 27 inches. Assembly weight is 8 ounces.

▼ BREVITY—Identify by IEN - 6351 if you write the maker ▼

HANDLING . . Self-dumping hopper, 1/2 to 2 cu. yd., rides on lift truck

Source: ROURA IRON WORKS
1405-9 Woodland Ave., Detroit 11, Mich.

Steel plate [illegible] in. in thickness is employed in welded assembly in a new 1 cu. yd. unit in the company's line of self-dumping locking-type hoppers. The new unit will handle castings and sprues as soon as they are knocked out of molds on a foundry floor or similarly hot forgings as they are made in a press department. The hopper is locked in carrying position and is released to dump by lifting a lever. It rights itself when it has been emptied.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 38

▼ BREVITY—Identify by IEN - 6352 if you write the maker ▼

World's Quickest Way to Rerail Cars and Locomotives

Nolan Rerailers Get 'Em Back on the Tracks, Saving Time, Labor, Money

How Nolan Rerailers Work. [illegible]

[illegible table]

Send Order Now! Immediate Delivery. Complete Satisfaction Guaranteed! Free Descriptive Literature If Desired!

THE NOLAN COMPANY, 114 Pennsylvania Street
Bowerston, Ohio

▼ BREVITY—Identify by IEN - 6353 if you write the maker ▼

IMPACT RESISTANCE . . . is the final test

CESCO Super-Tough lenses are guaranteed to equal or exceed federal specifications [illegible] . . . For Safety, use CESCO. [illegible]

CESCO spectacle type goggles [illegible]

FREE! . . . Send your name on company letterhead for CESCO's handy vest pocket catalog.

CHICAGO EYE SHIELD CO., 2326 Warren Blvd., Chicago 12, Illinois

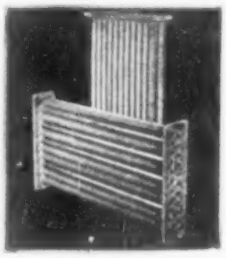
CESCO FOR SAFETY

[illegible]

▼ BREVITY—Identify by IEN - 6354 if you write the maker ▼

ROME HELICAL-FIN TUBING

Over 90 sizes in Production



Rome extended surface Helical Fin Tubing is a highly efficient—compact surface for heat exchanging work. It is supplied in [illegible] straight lengths, coils, or U bends with or without threaded end connections [illegible] it may be used with standard flare connections. [illegible]

- Water Cooled Refrigeration Condensers
- Air Cooled Refrigeration Condensers
- Steam Condensers
- Dry Cleaning Fluid Recovery Condensers
- Air Compressor Intercoolers and Aftercoolers
- Oil Coolers for Diesel Engines
- Fan Type Air Heating Coils
- Fan Type Air Cooling Coils
- Fan Type (Suspended) Unit Heaters
- Refrigeration Evaporators and Display Case Coils
- Turbine Air [illegible] Coolers
- Room Heating Convectors (Concealed Radiation)
- Diesel and Truck Engine Cooling Radiators
- Railway Diesel Engine Cooling Systems

Rome Helical-Fin Tubing is used and specified by nearly all large Nationally known manufacturers of heat exchanging equipment.

ROME-TURNEY RADIATOR COMPANY
Mfrs. of Refrigeration Condensers — Concealed Copper Radiation
Blast Air Heating and Cooling Coils and Other Transfer Equipment
200 EAST FRONT STREET ROME, N. Y.

▼ BREVITY—Identify by IEN - 6355 if you write the maker ▼

No pigs

in 168,930 lbs. of synthetic alloy iron!

with DETROIT ROCKING ELECTRIC FURNACE

The [illegible] Detroit Rocking Electric Furnace produced 168,930 lbs. of synthetic alloy iron without using pigs! [illegible]

You Can Effect Savings, Too!

[illegible]

Write today!

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY
1050 26th St. • BAY CITY, MICHIGAN

[illegible]

IEN-6356

TOO MUCH OIL? NOT ENOUGH OIL?

Eliminate MOTOR OILING HAZARDS WITH THE LUNKENHEIMER "ALVOR" CONSTANT LEVEL OIL CONTROL

THE LUNKENHEIMER CO.

IEN-6357

Another product designed with Du Pont NEOPRENE

How long can you "bake" a belt before it breaks?

Neoprene V-belts on fans in textile drying oven last 12 times as long as ordinary belts

FREE! THE NEOPRENE NOTEBOOK

NEOPRENE

The rubber made by Du Pont since 1932

DU PONT

BETTER THINGS FOR BETTER LIVING THROUGH CHEMISTRY

IEN-6359

DRIVE . . Variable pitch sheaves actuated by torque and driving speed

Source: DIESEL PUMP & ELECTRIC MFG. CO.
11843-47 Teale St., Culver City, Calif.

IEN-6360

TRAP . . Impulse design for steam operates on series-orifice principle

Source: YARNALL-WARING CO.
122 Mermaid Lane, Philadelphia 18, Pa.

IEN-6361

Stanzoil NL-34

New Worker Comfort in This Elastic Knit Lined Neoprene Glove

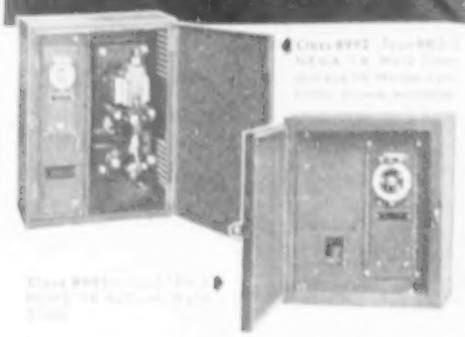
The Pioneer Rubber Company
135 Tiffin Road Willard, Ohio, U. S. A.
Los Angeles, California

STANZOIL PIONEER

OVER 30 Years OF QUALITY GLOVE MAKING

IEN-6362

SQUARE D CONTROL for SMALL SPOT WELDERS



SQUARE D COMPANY

IEN-6363

You Can be Sure of Clean Dry Air for your Compressed Air Tools

3500 Gallons

1 YEAR'S water extraction from air lines equipped with Adams Aftercooler and Cyclone Separator.

with ADAMS Aftercooler and Cyclone Separator

R. P. ADAMS CO., INC. 219 E. PARK DRIVE BUFFALO 17, N. Y.

IEN-6364

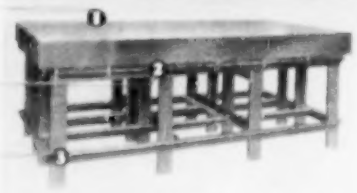
OKOLITE-OKOPRENE CABLES EXTEND CIRCUIT LIFE

THE BEST CABLE IS YOUR BEST POLICY

OKONITE insulated wires and cables

BREEZITY—Identify by IEN - 6365 if you write the maker

FOR REPEATED ASSEMBLIES AND ACCURATE LAYOUTS



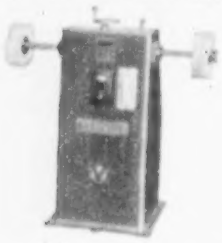
CHALLENGE
LAYOUT SURFACE PLATES

- Built to "stand the gaff" of hard service. True, smooth surfaces of special alloyed semi-steel with heavy, deep ribs to prevent sagging and yielding under load.
- Standard plates 6" thick. 8" plates on order. Sizes 12"x18" to 54"x144". Large units can be made up by grouping and keying several standard units.
- Build with or without sturdy, multi-legged arc-welded steel stand with lock leveling screws to allow quick leveling.

Write for Challenge Precision Equipment Catalog.

THE CHALLENGE MACHINERY CO.
GRAND HAVEN Challenge MICHIGAN

BREEZITY—Identify by IEN - 6366 if you write the maker



A MARSCHKE BUFFER TAILORED TO YOU

Goes without saying, it matters little which Marschke you select, from the standpoint of quality, a narrow one with only two bearings, or a wider one with four bearings, you'll find a stiff, true-running spindle.

The big point is, your ability to choose a Marschke to fit your needs EXACTLY. Marschkes come in a wide range of specifications: pedestal and floor stand types (as shown here), single and double end, 1 HP to 10 HP, direct or belt drive, with or without variable speed control for wheels or for abrasive belts.

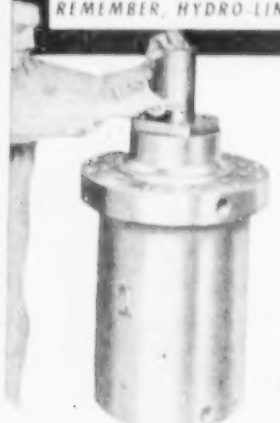
YOU tell us the problem, we'll bet we have a Marschke to fit it exactly.

VONNEGUT MOULDER CORPORATION
1827 MADISON AVENUE · INDIANAPOLIS 25, INDIANA

BREEZITY—Identify by IEN - 6367 if you write the maker

WHEN YOU CAN'T FIND THE SPECIAL CYLINDERS YOU NEED

REMEMBER, HYDRO-LINE BUILDS 'EM



STANDARD AIR AND HYDRAULIC CYLINDERS

FREE
ADDITIONAL DATA

Hydro-Line

HYDRO-LINE MFG. CO.
718 19th STREET
ROCKFORD, ILLINOIS

BREEZITY—Identify by IEN - 6368 if you write the maker

TESTING . . Potentiometer reads to 3 volts on electronic circuits

Source: SOUTHWESTERN INDUSTRIAL ELECTRONIC CO.
2829-33 Post Oak Road, Houston 19, Texas

Model P-2 is a new multiple potentiometer with battery power for general purpose measurements in electronics and electronic research and laboratory work. Typical applications are in reducing and evaluating measurements of readings with variable-resistance sensing elements and strain gages, measuring thermocouple activity.

Three scales read 0 to 1.0, 1.0 to 2.0, 2.0 to 3.0 volts. The instrument not current employs a standard reference cell and five tubes. A switch is provided to bypass battery. The dial has dial and 2-position switch with knob on 0.2 scale. Also between protective panel for 0.01 to .2 operation. Dimensions are 12 by 10 by 6 inches. Weight is about 10 pounds.

BREEZITY—Identify by IEN - 6369 if you write the maker

WELDING . . Rod and electrodes for hard facing deposit on steel

Source: AIR REDUCTION SALES CO.
1656 Lincoln Bldg., New York 17, N. Y.

Carbon, chromium, molybdenum, iron

Airolite-59 is a new hard-facing alloy available in the form of bare rod for deposit with an oxyacetylene torch or as a coated electrode for arc deposit on wear surfaces subject to abrasive wear or metal to metal friction. Hardness is maintained at temperatures to 800 deg. F. The alloy acquires a high polish in your grinding service.

BREEZITY—Identify by IEN - 6370 if you write the maker

HEATING . . Perforated steel cover for company's baseboard Radi-Vector

Source: VULCAN RADIATOR CO.
24-28 Francis Ave., Hartford 6, Conn.

Type L designates new 24-gauge steel cover for baseboard type Vulcan Radi-Vector heating element. The cover rides in a slot formed in the rear sheet which appears on the wall and keeps the support clips for the front sheet. The cover is supplied in lengths to 8 ft. Lengths longer than 8 ft. are supplied in sections. It is painted a dusted color to the left.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 16

BREEZITY—Identify by IEN - 6371 if you write the maker

NEW TOOL WELDS SAFETY-TREADS FASTER, BETTER AT LOWER COST

No Arc to "Hold" with New Vibrator Welding Tool—Deposits Non-Slip Beads on Metal Surfaces at 5 FPM—Total Cost 10¢ per Sq. Ft.

Now you can do a quick job of preventing slippage and falling accidents on metal stairs, floor areas, single metal treads quickly and easily with the RUT-TRUE welding electrode holder. Used on standard AC or DC weld machines, the RUT-TRUE [illegible] Approved Safety Treads, welding beads which strongly resist wear, dirt, grease, oil, water, ice and snow. Also, a quick low cost, efficient [illegible] method for [illegible] well supplied—the RUT-TRUE [illegible] Tool. [illegible] Price [illegible] Write for FREE Bulletin Now.

METALLIZING ENGINEERING CO., INC.
38-34 29th STREET · LONG ISLAND CITY 1, N.Y.

BREEZITY—Identify by IEN - 6372 if you write the maker

Nutting FLOOR TRUCKS · WHEELS · CASTERS

Here are two veterans of the Nutting line—proven resources for and tough for faster material handling. These easy rolling, well-balanced trucks get the job done right—on time! Your men will like to work with them—and their cost per year is hardly visible.

Fig. 16—No. 24

Fig. 1126
Non-Tipping Bar Handle Truck

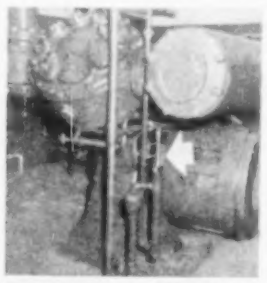
Write for Bulletin 49-C

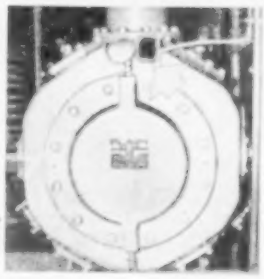
Over 59th Year

NUTTING TRUCK AND CASTER COMPANY
2001 DIVISION STREET, FARIBAULT, MINNESOTA

BREEZITY—Identify by IEN - 6373 if you write the maker

2/3 OF COOLING WATER Saved!

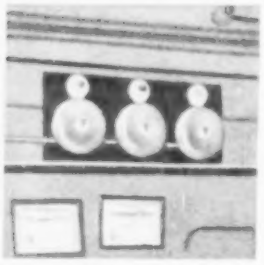




The Engineer at The Harvey Metals Corp. is well pleased with the Sarco TR-21 cooling control on this big compressor in Chicago. And so is the management because up to ⅔ of the metered water used for cooling is now saved. The engineer says: "With several thousand dollars tied up in a compressor, you are going to open up the cooling line wide and play safe, unless you have cooling control. Yes, we use the warm water too, but it used to overflow the hot well continually."

OTHER SARCO COOLING CONTROLS

When you merely want to protect the engine or compressor and don't care about the water there are several Sarco combinations available. You can put a high limit control on the compressor which will flash red lights and ring the gong when danger is near. Or you can just put on a Sarco Control that shuts down the compressor when the water gets too hot.



Bell rings and red light flashes when compressor cooling water gets too hot.

ASK FOR BULLETIN No. 700 ON SARCO COOLING CONTROLS

SARCO SAVES STEAM
SARCO COMPANY, INC.
Represented in Principal Cities
Empire State Building, New York 1, N.Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO
IMPROVES PRODUCT QUALITY AND OUTPUT

IEN-6375

DIRECT VEEDER-READINGS

help you keep a line on Linear Production

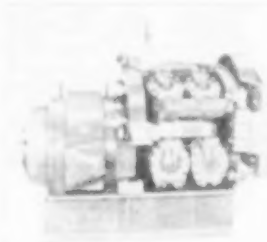
It's as simple as this: Textiles and other materials pass under the smooth-surfaced twin wheels. And the worm-drive gears inside the counter cause the 5 figures to indicate directly in yards, feet, meters, or other units. The wheels are one foot in circumference . . . and other types of wheels, even grooved ones, can be had, for other purposes and materials. This Rugd Worm-Driven Counter is one of scores of Standard Veeder-Root Counters. Write for Condensed Catalog 70

VEEDER-ROOT INC., HARTFORD 2, CONN.

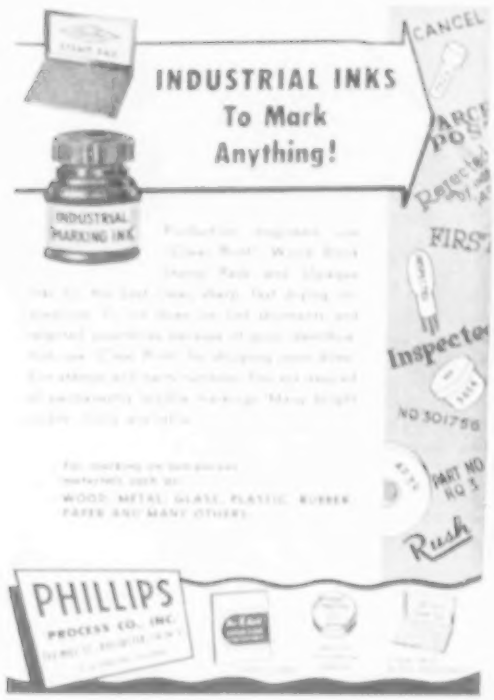
IEN-6378

COMPRESSOR . . Semi-radial design, 81 to 640 cfm. at 125 pound pressure

Source: JOY MFG. CO.
48 Oliver Bldg., Pittsburgh 22, Pa.



IEN-6381



IEN-6376

For Quick Availability Always
GET YOUR BEARINGS

From BEARING SPECIALISTS

Members of THE ANTI-FRICTION BEARING DISTRIBUTORS' ASSOCIATION

There is a "Bearing Specialist" near you that can provide you with a tried and proven, fast, dependable service even on "hard-to-get" bearings. Your "Bearing Specialist" has instantly available a complete stock of sizes and types of bearings. His considerable storage space, highly trained personnel, and years of experience in your problems of economical production mean: When you require quick service, call a "Specialist". He can save you money and we will bet on number—all or one and give you full information.

"INSTALLATION, MAINTENANCE, REMOVAL of ANTI-FRICTION BEARINGS"
This 20-page booklet tells you the how and why of caring for all types of bearings. Practical ideas on all phases of bearing life. Ask for it now!

A word about the ANTI-FRICTION BEARING DISTRIBUTORS' ASSOCIATION

A group of BEARING SPECIALISTS, organized with and for every purpose of enhancing bearing performance, the highest standards of business ethics and promoting a spirit of good fellowship and cooperation among the members, and a mutual interest in further greater service to bearing users.

THE ANTI-FRICTION BEARING DISTRIBUTORS' ASSOCIATION
1900 Euclid Ave., Cleveland 15, Ohio

IEN-6379

CONTROL . . Unit panel assembly of instruments for electric furnaces

Source: CLAUD S. GORDON CO.
3202 S. Wallace St., Chicago 16, Ill.

IEN-6380

WITH
McDonald
REVERSALARM

B. F. McDONALD CO.
Manufacturers of Industrial Safety Equipment
5110 SOUTH HOOVER ST., LOS ANGELES 37, CALIF.
Other Offices in San Francisco & Houston

IEN-6382

Stop
Grinding Tie-Ups . . .
Spot (B&D)
These Grinders . . .
Around Your **Shop**

WHY DO UP WORK

SEE YOUR NEARBY B&D DISTRIBUTOR

Buy BLACK & DECKER — the Complete Bench Grinder Line!

6 $58 8 $98 10 $138

Black & Decker
PORTABLE ELECTRIC TOOLS

BRIEFITS—identify by IEN-6384 if you write the maker

CAMBRIDGE

pH METERS

line-operated — accurate!

Accuracy: Resource 0.2 pH, Laboratory 0.2 pH, production 0.5 pH. Other fine features: Cambridge pH equipment includes simple, and multi-point calibration and repeaters. Send for bulletin WCAM

CAMBRIDGE INSTRUMENT COMPANY, INC.
3710 Grand Central Terminal, New York 17, N. Y.
Pioneer Manufacturers of
PRECISION INSTRUMENTS

BRIEFITS—identify by IEN-6385 if you write the maker

WHICH SCAFFOLD IS BEST FOR YOUR WORK?

ALUMINUM OR STEEL LADDER SCAFFOLDS
Easy-to-erect, sectional equipment.

ALUMINUM ROLLING SCAFFOLDS
Sectional frame-type scaffolds for general use.

STEEL ROLLING SCAFFOLDS
For access to overhead machinery, walls and ceilings.

LADDERS
Top-quality wood or magnesium extension, single, step ladders.

TRESTLES
Strong, adjustable wood trestles for painting.

SWINGING SCAFFOLDS
Steel or aluminum for exterior painting, glazing, repairs.

TUBELOX
Only four basic parts . . . for storage racks and other temporary structures.

Write For Free Bulletins Describing These and Other Products For the Manufacturing Plant.
Complete Nation-Wide Scaffolding Service

WHAT YOU NEED WHERE YOU NEED IT WHEN YOU NEED IT

THE PATENT SCAFFOLDING CO., Inc.
DEPT. IE, 18-21 12th STREET, LONG ISLAND CITY 1, N. Y.
Consult Your Classified Telephone Directory for nearest office

BRIEFITS—identify by IEN-6387 if you write the maker

CONVEYING . . Floor lock attachment holds position of a roller conveyor

Source: METZGAR CO.
417 Douglas St. N. W., Grand Rapids 4, Mich.

Pelican is a line of [illegible] operated by a turn and lever at the base of a slanted support for the usage of a line of [illegible] equipment. The unit lifts the equipment, wheels it [illegible] the floor and provides a flat stable support in place of the wheels. It [illegible] tracks and retains the wheels in the floor where the conveyor is to be moved.

BRIEFITS—identify by IEN-6388 if you write the maker

COOLING . . Drinking fountain for safe use in explosive atmospheres

Source: CORDLEY & HAYES
441 Fourth Ave., Room 1005, New York 16, N. Y.

Rates 15 gallons cold water per hour

Model F-10WE is a new accessory in the company's line of cooling fountains in which the self-generating equipment is [illegible] that the unit is safe for operation in hazardous areas. Class I Group D and D as defined by the National Electrical Code.

The fountain requires a [illegible] and [illegible] average [illegible] and a [illegible] supply pressure. The [illegible] and [illegible] volume is [illegible] gals. [illegible]. The cooled base is black. The [illegible] steel. A foot pedal [illegible] operation. Overall dimensions are [illegible] 45 inches.

BRIEFITS—identify by IEN-6389 if you write the maker

CONNECTORS . . Air operated tool crimps company's terminals on wire

Source: AIRCRAFT-MARINE PRODUCTS INC.
1566 N. 4th St., Harrisburg, Pa.

Detachable jaws [illegible] and positive [illegible] are available with [illegible] are interchanged to accept the [illegible] terminals [illegible] Wire sizes [illegible] No. 22 to No. 1/0 in two wires that [illegible] in the crimping zone. The tool is fitted with a [illegible] [illegible] pressure from a compressor is 80 pounds. Two handles [illegible] the tool [illegible] operation with [illegible] from overhead and to hand-held [illegible].

All Makers of These And All Other Products Are Listed In THOMAS REGISTER — Descriptions — Ratings — See Page 50

BRIEFITS—identify by IEN-6390 if you write the maker

The World's Most Efficient
CONCRETE DRILL

THE TILDEN ROTARY KONKRETE KORE DRILL

- Drills at 2 to 8 inches per minute
- Drills overhanging bars and beams in concrete
- Drills up to 30 feet of concrete without withdrawing
- Gives straight, clean holes for anchors, conduit, etc.
- Gives [illegible] drilling drill

[illegible] are available in standard sizes of from ½" to 4" diameter. Quotations on larger sizes on request.

[illegible] for ordering with complete details on these revolutionary concrete drill bits.

TILDEN TOOL MANUFACTURING COMPANY
1995 NO. FAIR OAKS, PASADENA 3, CALIFORNIA

BRIEFITS—identify by IEN-6391 if you write the maker

Because they're years ahead in steam generation . . .

only CYCLOTHERM STEAM GENERATORS have cyclonic combustion POWER

WHAT IS IT? It's the modern scientific discovery of transferring heat at the highest degree of efficiency with a new low in fuel consumption. Principal factors of which are the cylindrical swirl flame with its exclusive cyclo-motion power, designed to utilize the full potential of every particle of fuel . . . and the thin layer of air resulting from centrifugal force that's always between the flame and wall of combustion chamber, a combination to produce steam far in excess of conventional standards for measured heating surfaces.

SEND FOR ALL THE BIG REASONS

Learn how the completely automatic Cyclotherm with its unexcelled all-in-one package type features wipe out waste and excess costs. If you are planning a new or replacement boiler installation it will pay you to first get the facts on Cyclotherm.

SIZES available to fit your steam or water load for generating or heating. Low pressure to 200 psi fired with light or heavy oil, gas or combination.

Without Obligation Write for Bulletin F-1

CYCLOTHERM CORPORATION
OSWEGO, N. Y.

BRIEFITS—identify by IEN-6392 if you write the maker

with Pressure-Sensitive
KUM-KLEEN LABELS

For your convenience right where they're needed . . . as long as they're needed . . . General Controls can put your personal KUM-KLEEN labels.

KUM-KLEEN labels are applied without interrupting of production operations and they stick without applying or curing, even through exposure of heat and humidity. They adhere permanently to hard to label surfaces, including glass, metal, plastics, etc. The overall protective coat of KUM-KLEEN labels is lower than other methods of marking.

Durable, moisture and chemical resistant, colorfast, permanent, and other advantages are KUM-KLEEN labels.

Kum-Kleen

SEND FOR DETAILS AND SAMPLES
ADDRESS DEPT. IEN-7
AVERY ADHESIVE LABEL CORPORATION
[illegible]

BRIEFITS—identify by IEN-6393 if you write the maker

VIKING
The Design That Made ROTARY PUMPS Famous

Viking is the original, patented gear rotary pump. It meets the needs of fast and positive priming, quick delivery and the handling of a wide range of liquids.

Pressures range to 100 psi in standard construction . . . 200 psi in heavy-duty construction . . . 500 psi in hydraulic application.

A record of 35 years holding the most complete of all rotary pump designs is behind the original, genuine Viking.

The record of building this one design exclusively is evident in the performance of all Viking gear and rotary pumps, the design that made others pumps famous.

Learn today why the Viking Rotary Pump will fit your liquid handling job to perfection. Ask for free bulletin 500A.

Viking PUMP COMPANY
Cedar Falls, Iowa

REFER TO IEN-6394 if you write the maker

"HOLD EVERYTHING"

with this strong, open-side, all-purpose handy vise.

Takes work from 3 sides
Range from 2 1/8" to 8 5/8"
Positive non-slip grip

Ideal for valves, manifold fittings and all other hard to hold items

BAKER OIL TOOLS, INC.
BOX 2274 TERMINAL ANNEX, LOS ANGELES 54, CALIFORNIA

REFER TO IEN-6395 if you write the maker

Need Pressure Tanks?

When you do—and they are made of steel or alloy plates—we are equipped to build them promptly at reasonable cost. The installation shown above, which stores sulphur dioxide at a pulp mill in Florida, is a typical example of the pressure tanks we supply to the paper, petroleum, chemical, and other processing industries. Write our nearest office for quotations, stating capacity, dimensions, pressure and location.

CHICAGO BRIDGE & IRON COMPANY
2123 McCormick Building • Chicago 4, Illinois
Atlanta • Birmingham • Boston • Cleveland • Detroit • Houston
Los Angeles • New York • Philadelphia • Salt Lake City
San Francisco • Seattle • Tulsa
Plants in BIRMINGHAM, CHICAGO, SALT LAKE CITY and GREENVILLE, PA.

REFER TO IEN-6396 if you write the maker

How to Solidly Anchor LOOSE BOLTS

STOPS LEAKS
SMOOTH-ON
No. 1
CEMENTS IRON

Bolts with worn threads—stripped bolts in stripped holes—bolts passing through thin walls—bolts holding ill-fitting seal flanges—all can be tightened firmly with quick-setting Smooth-On No. 1 Iron Cement. Use it, too, to lock nuts tight, add to valves and prevent unscrewing bolt heads in metal or wood. Thousands star tight breaking threads. It expands slightly as it hardens. Buy Smooth-On No. 1 in 1/2 lb., 1 lb., 10 lb., or 100 lb. size and keep it handy. If your supply house doesn't Smooth-On, write us.

FREE REPAIR HANDBOOK

10 Pages filled with time-saving, money-saving repairs on plant, shop and home equipment made with No. 1 and other Smooth-On Cements. Drop us a line for YOUR free copy.

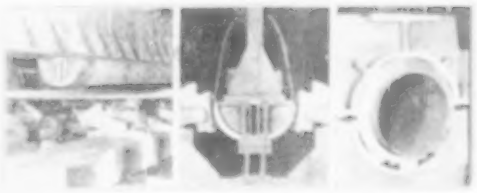
SMOOTH-ON MFG. CO., Dept. 1
520 Communipaw Ave., Jersey City 4, N. J.

Do it with SMOOTH-ON
THE IRON CEMENT OF 1000 USES

REFER TO IEN-6397 if you write the maker

PRESS TOOLS . . Adjustable design for 40 ft. lengths of pipe to 36 in.

Source: VERSON ALLSTEEL PRESS CO.
9325 S. Kenwood Ave., Chicago 19, Ill.



New tools [illegible]

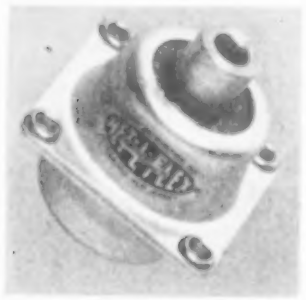
The Clamping [illegible]

The closing tools [illegible]

REFER TO IEN-6398 if you write the maker

INSULATING . . Vibration isolator employs a resilient metal mesh pad

Source: ROBINSON AVIATION INC.
69 Industrial Ave., Teterboro, N. J.



The square base [illegible]

All Makes of Those And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 56

REFER TO IEN-6399 if you write the maker

PAGE FENCE *Since 1883*

• AMERICA'S FIRST WIRE FENCE •

There's one "Best" for You

[illegible]

Write to PAGE FENCE ASSOCIATION in Milwaukee, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, Pittsburgh, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

REFER TO IEN-6400 if you write the maker

REDUCE HANDLING of Tools, Parts and Materials

STACKBINS [illegible]

STACKRACKS [illegible]

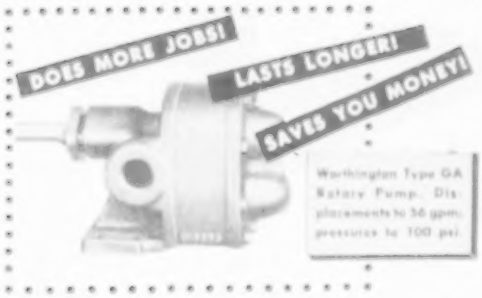
[illegible] IN STOCK

STACKBINS IN STACKRACKS

Manufactured and sold in Canada exclusively by Wickwire Steelite Ltd., Ottawa
Write Stackbin Corp.
277 Main St., Pawtucket, R. I.

STACKBIN SYSTEM
"Stacked and Still Accessible"

REFER TO IEN-6401 if you write the maker



Here's a small rotary pump that handles hot, cold, thin or viscous liquids—under correct conditions. Amazingly simple and rugged, the GA has many advanced features that assure longer, lower-cost, trouble-free pumping.

Like every other pump in Worthington's complete standard line—which includes all types and sizes—the GA is "job ready" for top performance in its particular work-range.

Make Worthington—with its longest experience in the field—your "pump headquarters"—for service that proves *there's more worth in Worthington*. Write to *Worthington Pump and Machinery Corporation, Dept. G821, Merchandising Division, Harrison, New Jersey.*

WORTHINGTON

REFER TO IEN-6402 if you write the maker

STAINLESS is PAINLESS . . .

when you work from

FRASSE STOCKS

[illegible]

Distributed by distributors [illegible] stocks.

[illegible]

[illegible] Frasse & Frasse Steel Co., Inc., 17 Grand Street, New York 13, N. Y. Philadelphia, Buffalo, Syracuse.

FRASSE *for Stainless Steels*

NEW: [illegible]

Write for your free copies today.

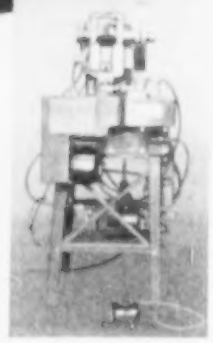
IEN-6403

order JOHNSON BRONZE BEARINGS from catalog

Johnson Bronze
SLEEVE BEARING HEADQUARTERS
476 SOUTH MILL STREET • NEW CASTLE, PA.

IEN-6404

CUT COSTS of feeding punch press with GAST vacuum pumps



WRITE FOR "APPLICATION IDEAS" BOOKLET ALSO GAST CATALOG

"AIR MAY BE YOUR ANSWER"

GAST AIR MOTORS · COMPRESSORS · VACUUM PUMPS

IEN-6405

NOW! A Great New Modine Cabinet Unit for both HEATING and COOLING

Modine CABINET UNITS for Heating and Cooling

IEN-6406

TRANSFORMER . . Air cooled design for light and power, 15 to 200 kva.

Source: AMERICAN TRANSFORMER CO.
283-87 Emmet St., Newark 5, N. J.

IEN-6407

PROTECTING . . Plastic cover lens for arc welding helmets and goggles

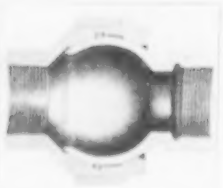
Source: THERMACOTE CO.
418-22 S. San Pedro St., Los Angeles 13, Calif.

List price is 25 cents

IEN-6408

PIPE FITTING . . Swivel ball joint made of bronze, ⅛ to 4 in., 300 lb.

Source: JOHN G. BELL CO.
710-14 E. 6th St., Los Angeles 21, Calif.



All Makers of These And All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 10

IEN-6409

ACE Drain-Tile Machine employs NOPAK Cylinder, Valves!

GALLAND-HENNING MFG. CO.

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

IEN-6410

Aerovent FAN EXTENDED SHAFT FAN
KEEPS MOTOR OUT OF AIR STREAM

For industrial applications where it is desired to keep the motor out of the air stream to meet Underwriter's specifications for exhausting explosive vapors. It protects the motor from high temperature air, corrosive fumes, or combination of obnoxious fumes and moisture.

Certified Ratings — AMA

Other Models
Direct Connected, Man Cooling, Duct Type, Belt Driven, Pulley Driven, Sizes 12" to 144"

Write today for ENGINEERING BULLETIN

AEROVENT FAN CO., INC.
ASH AND BROWN STREETS, PIQUA, OHIO
Competent Sales Engineers in Principal Cities

IEN-6411

NOW MULTI-WALLED PARTS DE-BURRED IN 1 DOUBLE-QUICK OPERATION

NEW NOBUR BURR-REMOVING TOOL QUICKLY AND EASILY REMOVES BURRS FROM HOLES ON MULTI-WALLED PARTS!

NOBUR MANUFACTURING CO.
717 N. Victory Blvd., Burbank, California

NO/BUR TOOLS

IEN-6412

Check! the effects of TEMPERATURE and RELATIVE HUMIDITY

✔ on workers
✔ machine output
✔ assembly parts

with the BENDIX-FRIEZ Model 160

WRITE

FRIEZ INSTRUMENT DIVISION of BENDIX AVIATION CORPORATION
1339 Taylor Avenue
Baltimore 4, Maryland
Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N.Y.

IEN-6413

MULTICLONE Collectors offer unusual advantages in compactness and adaptability to the space limitations of industrial plants. They save space four ways . . .

1. Greater Compactness.
2. Single Dust Requirements.
3. Maximum Flexibility.
4. Fit Cramped Spaces.

WESTERN Precipitation CORPORATION

IEN-6414

TRU-LAY Push-Pull is precision-made. Therefore it . . .

is positive in action as a steel rod, yet flexible as wire rope

transmits action over long or short lengths, with few or many bends

will operate while flexing, with practicable no lost motion

is made in capacities up to 1500 pounds input

is designed for long life—a machine part—not a flimsy gadget

MAIL THE COUPON BELOW

ACCO

AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE

Please send me copy of descriptive bulletin DH-87-E-1

Name
Company Name
Address
City Zone State

IEN-6416

CONTAINER . . Steel 55 gallon drums, lithographed outside, coated on inside

Source: RHEEM MFG. CO.
570 Lexington Ave., 11th Fl., New York 22, N. Y.

Bluecoride

The drums

IEN-6417

HEATING . . Electronic generator for induction heating, 2.5 to 10 kw.

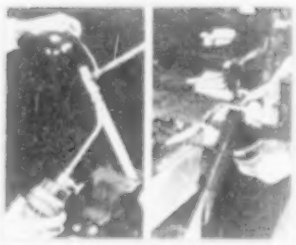
Source: HAYDU BROTHERS
P. O. Box 1226-A, Plainfield, N. J.

Assembled in rectangular housing

IEN-6418

HEATING . . Petroleum fuel torch is self-pressurizing, to 2,200 deg. F.

Source: PRESSURE PRODUCTS CORP.
138-42 N. Dearborn St., Chicago 2, Ill.



Price

IEN-6419

SILVER BRAZING DONE BY EXPERTS

SOLVES MANY MONEL, NICKEL, STEEL AND BRASS ASSEMBLY PROBLEMS

HYDRAULIC AND GAS-TIGHT ASSEMBLIES ENGINEERED TO YOUR SPECIFICATIONS

METALCO, INC.
JACKSON, MICH.

IEN-6420

Solves "SMALL PARTS" Production Problems

RIVETING
PRESSING
STAKING
MARKING
PUNCHING
ASSEMBLING

the New HANNIFIN "Han-D-Press" air operated!

HANNIFIN CORPORATION
1107 So. Kilbourn
Chicago 24, Illinois

IEN-6421

FROM REMOVING PAINT AND GENERAL MAINTENANCE...

. . . To Finishing Fine Pianos . . .

OPPOSED PAD RECIPROCATION

SUNDSTRAND
Sanders Produce a Better Finish in Less Time

Free Additional Data

SUNDSTRAND MACHINE TOOL CO.
PNEUMATIC MACHINE DIVISION
ROCKFORD, ILLINOIS, U.S.A.

IEN-6422

For a QUICK SOLUTION of Your DRIVE PROBLEMS

Flexible Efficient DIAMOND ROLLER CHAINS

DIAMOND ROLLER CHAINS

▼ BREEFITT—Sheets by IEN - 6423 ▼

another FIRST in McGILL precision bearings

an entirely NEW PRINCIPLE in roller bearing design

The NEW McGILL GUIDEROL roller bearing

McGILL

precision bearings

▼ BREEFITT—Sheets by IEN - 6424 ▼

Get Floors Really Clean . . . Faster . . .

TEAM UP Your Scrubber with a Cleanser that's MADE for It!

Cleansers designed for hand scrubbing cannot be expected to give the fast cleaning action required for machine scrubbing. To utilize the full cleaning capacity of your scrubbing machine — to get floors *blue-free* clean in minimum time — choose a cleanser that's specially made for machine scrubbing. *All Finnell Cleansers are.* And there's a type for every need, including *Solid*, the mineral oil solvent for cleaning oily wood floors. The *Finnell Machine* shown above is a *Self Propelled Scrubber Cleanser* for use on large area floors. Clean up to 5,000 sq. ft. per hour! For consultation, demonstration, or literature, phone or write nearest *Finnell Branch* or Finnell Service for... 1047 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC. *Pioneers and Specialists in* FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES — BRANCHES IN ALL PRINCIPAL CITIES

▼ BREEFITT—Sheets by IEN - 6425 ▼

Hamilton *Shallow Drawer* Units keep *every* sheet

smooth . . . clean . . . accessible!

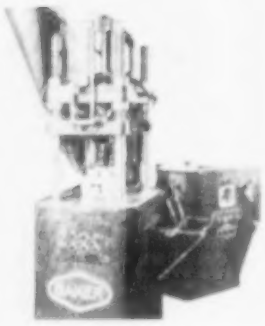
Hamilton Manufacturing Company, Two Rivers 5, Wisconsin

HAMILTON MANUFACTURING COMPANY
TWO RIVERS, WISCONSIN

▼ BREEFITT—Sheets by IEN - 6426 ▼

PLASTIC MOLDING . . Hydraulic press to handle quick-curing alkyd resins

Source: BAKER BROTHERS INC
P. O. Box 101-A, Sta. F., Toledo 10, Ohio



▼ BREEFITT—Sheets by IEN - 6427 ▼

FUSE . . Cartridge design has 100,000 amp. interrupting capacity

Source: GENERAL ELECTRIC CO.
Dept. 6X-201, Schenectady 5, N. Y.

All Makers of Their And All Other Products Are Listed In THOMAS REGISTER — Descriptions — Ratings — See Page 50

▼ BREEFITT—Sheets by IEN - 6428 ▼

BUILD BUSINESS WITH FRICK UNIT AIR CONDITIONERS

FRICK & Co.

▼ BREEFITT—Sheets by IEN - 6429 ▼

Why a VICKERS *Standard* Magnetic Amplifier can improve your controls

HIGH PERFORMANCE
NO MAINTENANCE
RUGGED CONSTRUCTION
NO WARM-UP TIME
RESPONDS TO SUM OR DIFFERENCE OF SEVERAL SIGNALS
ALLOWS ELECTRICAL ISOLATION BETWEEN CIRCUITS

Typical Applications

Speed regulators • Voltage regulators • Servo systems positioners and indicators • Hydraulic valves • Control valves • Temperature regulators • Lamp and furnace controls

Write for Bulletin 20-A describing Vickers complete line of Magnetic Amplifiers. Please make request on your letterhead.

VICKERS ELECTRIC DIVISION
ST. LOUIS 7, MISSOURI

▼ BREEFITT—Sheets by IEN - 6430 ▼

A MUST! for PERMANENT MOLDING use GRAFOLUX

Grafo

A GRAND COLLOIDAL PARTING COMPOUND That Insures
LONGER MOLD LIFE
EASIER PARTING
TOP PRODUCTION
SURFACE QUALITY

A WORKING SAMPLE SENT ON REQUEST

"Grafo" Colloidal Graphite may be obtained in water, petroleum oil and castor oil, in concentrated, semi-concentrated and ready-to-use mediums.

Write for Regarding Your Special Application

GRAFO COLLOIDS CORPORATION

SHARON, PENNSYLVANIA

▼ BREEFITT—Sheets by IEN - 6431 ▼

"Industrial Gear"

WE MEET YOUR SPECIFICATIONS

The Plant that Quality and Service Built

INDUSTRIAL GEAR MFG. CO.
4521 VAN BUREN STREET CHICAGO 24, ILLINOIS

IEN-6432

Uniform Packages Make These Demands . . .

If your packages you are faced with three factors—underweight, overweight and EXACT WEIGHT. The aim should be to eliminate the first two . . . reduce the latter at the lowest cost possible. Trimming costs is accomplished by better materials, better operation, and sound equipment. When you package eliminate the overweight contamination problem . . . correct the underweight packages—stop short weights. The control mission is EXACT WEIGHT. Scales to fit your job be it hand check-weighing, semi-automatic or fully automatic is nature. A uniform package is what it is supposed to be, no more, no less. If you packages you must weigh accurately and when volume is pleasant it must be fast and accurate. From bulk to machine to final packaging. Write for full details pertaining to your product.

EXACT WEIGHT SCALES

Industrial Precision

THE EXACT WEIGHT SCALE COMPANY

110 W. Fifth Avenue, Columbus 8, Ohio
2920 Bloor St., W., Toronto 18, Canada

IEN-6433

BRIGGS & STRATTON GASOLINE ENGINES

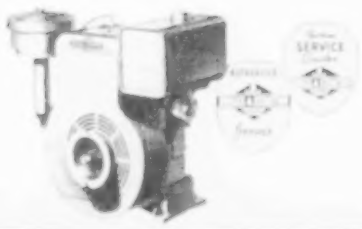
World-wide SERVICE

Through the Largest Network of its Kind in the World

There is a Briggs & Stratton service organization, factory-trained and supervised, near you — with a complete stock of genuine Briggs & Stratton parts for all models.

Briggs & Stratton service is world-wide — and constitutes the largest network of its kind. It is an important part of Briggs & Stratton's continuous effort to make its engines of greatest constant value to their users.

BRIGGS & STRATTON CORPORATION
Milwaukee 1, Wisconsin, U. S. A.

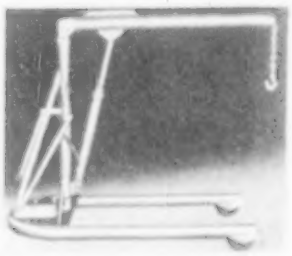


In the automotive field Briggs & Stratton is the recognized leader and world's largest producer of locks, keys and related equipment.

IEN-6435

CRANE . . Hand hydraulic assembly wheel mounted, 1,000 lb. at 4 ft. reach

Source: RUGER EQUIPMENT CO.
613 W. 4th St., Uhrichsville, Ohio



IEN-6436

TESTING . . Liquid indicator for alkalinity, green to gray to purple

Source: E. F. DREW & CO.
15 E. 26th St., Room 2015-A, New York 10, N. Y.

Small sample upon request

IEN-6437

HEATING . . Gasoline blow torch holds quart of fuel in seamless body

Source: P. WALL MFG. CO.
215 Erie Ave., Grove City, Pa.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 50

IEN-6438

Genuine Natural Rubber **INDUSTRIAL GLOVES**

REINFORCED SAFETY

NON-SLIP FINGERS — PALM-THUMB CROTCH

No. 5613 FIRM-GRIP
No. 5615 SMOOTH
LENGTH: 14 inches
GAUGE: 18 gauge
COLOR: Brown
SIZES: 6-10-12

The outstanding value and broad utility that Genuine Natural Rubber affords. Heavy gauge construction, high tensile strength, and exceptional durability with extra heavy reinforcement at points of wear. Long and short gauntlets in heavy and lighter gauge units with grain, smooth surface, plus assortment of patterns and purpose uses.

*Request sample and specifications.

SEIBERLING LATEX PRODUCTS COMPANY
AKRON 9, OHIO

IEN-6439

IEN-6440

SPRACO NOZZLES

Write for NOZZLE CATALOG *to*
SPRAY ENGINEERING CO.
110 CENTRAL STREET • SOMERVILLE 45, MASS.

IEN-6441

FOR YOUR 7 TO 13 H.P. POWER JOBS

Two-Cylinder **WISCONSIN** Heavy Duty *Air-Cooled* **ENGINES**

Designed and built to traditional Wisconsin Motor heavy-duty service standards. Model H Air-Cooled 2-cylinder engines provide ideal power within the component units or integrated equipment, or as stationary or portable general purpose power within the 7 to 13 hp. bracket.

The Model H delivers from 7.3 to 11.3 hp. and the Model W from 8.8 to 13.3 hp. within a 1400 R.P.M. to 2600 R.P.M. speed range. Features include: tapered roller bearings at BOTH ends of the heat-treated, drop-forged crankshaft; high tension rotary-type DUTTON Magneto with impulse coupling; oil bath air cleaner; ¾" standard Pump feed lubrication, positive lubrication by Pump with individual oil stream to each rod . . . plus dependable air-cooled operation from cold start to 140° F.

For "Most H.P. Hours" of all-the-job power service, specify Wisconsin Air-Cooled Engines . . . single cylinder, 2-cylinder and 4-cylinder, in a complete power range from 3 to 30 hp.

WISCONSIN MOTOR CORPORATION
World's Largest Builders of Heavy-Duty Air-Cooled Engines
MILWAUKEE 46, WISCONSIN

▼ REPRINT—Ideas to IEN-6442 if you write the maker ▼

Engraving

Here is the most versatile machine. So simple to operate by unskilled labor.

PROFILING
VERTICAL
MILLING

NEW HERMES Engraving Grand

This heavy duty bench type model covers a larger engraving area than any other machine of its kind.

NEW HERMES, Inc.

Dept. 43 • 43-19 UNIVERSITY PL. • NEW YORK 3
World's Largest Manufacturers of Pantograph Engraving Machines

NEW LITERATURE

Each issue we advise you of available new literature submitted by the manufacturers covering products they offer for your use. Identification, size of the material, information it contains so you can judge its value to you.

AIR CONDITIONING — [illegible] IEN-6441

AIR CONDITIONING — [illegible] IEN-6442

BENDING — [illegible] IEN-6443

BRAKES — [illegible] IEN-6444

BRIGHTENING — [illegible] IEN-6445

CENTERS — [illegible] IEN-6446

CIRCUIT BREAKERS — [illegible] IEN-6447

CLEANING — [illegible]

CLEANING — [illegible]

CONNECTORS — [illegible]

CONNECTORS — [illegible]

CONSTRUCTION — [illegible]

CONTAINERS — [illegible]

CONTROLS — [illegible]

CONTROLS — [illegible]

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 56

▼ REPRINT—Ideas to IEN-6446 if you write the maker ▼

ROTARY
INDUSTRIAL
BRUSHES

Let "PITTSBURGH"
solve your brush problems

Makes production speeds [illegible] power driven brushes [illegible] the processing and finishing [illegible] plastic surfaces and the right brush means better quality work, increased production, fewer rejects.

One typical brush engineered [illegible] and design and build power driven brushes to meet your particular requirements. Or you may find what you need in the regular Pittsburgh line. Because there's a Pittsburgh brush for every surface and use.

See your jobber or contact PITTSBURGH PLATE GLASS COMPANY, Brush Div., Dept. M.S. 2217 Frederick Ave., Baltimore 29, Maryland.

PITTSBURGH
Power Driven
BRUSHES

BRUSHES • PAINT • GLASS • CHEMICALS • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

▼ REPRINT—Ideas to IEN-6443 ▼

LIFT OR LOWER – FLOOR TO FLOOR

Move boxes, cases, cartons, sacks or bundles from basement to first floor, or any floor to floor — economically with the Standard Inclinebelt Conveyor — simple to install — minimum maintenance and attention. Lifts to heights of 10 to 30 feet at five feet per ft. floor elevations of 8 ft. or 14 ft. 6 inches in clearance, two belt widths to handle accommodates 158 inches to 258 inches wide. Electric motor operated. Write for Bulletin No. 10A.

Standard Conveyor Company
North St. Paul, Minn.

Sales and Service in Principal Cities

Standard
CONVEYORS

▼ REPRINT—Ideas to IEN-6445 ▼

AN EFFICIENT TYPING STATION

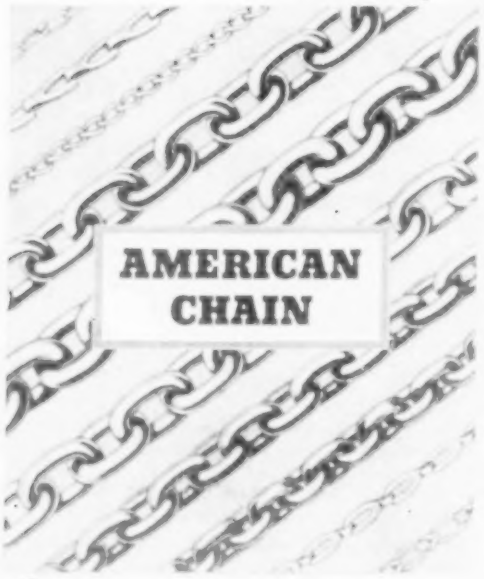
booklet describes how you can increase office productivity through an Efficient Typing Station.

Source: Remington Rand Inc., Business Machines and Supplies Division, Room 1440, 315 Fourth Ave., New York 10, N. Y.

▼ REPRINT—Ideas to IEN-6447 ▼

the most important Question about Chain:

WHO MAKES IT?...



...

Whether you buy chain for your own use or as part of your product, you want to know that it is good, strong, dependable, high quality chain. And the best way to be sure of that is to know who made it.

Nothing will ever lower the quality of Acco Welded Chain, Welless Chain, or Attachments. Our research department is constantly endeavoring to improve the quality of American Chain, thereby increasing its service to the user.

Buy AMERICAN
. . . the complete chain line

ACCO Inc. York Pa. Atlanta Chicago Denver Detroit Los Angeles New York Philadelphia Pittsburgh Portland San Francisco Bridgeport, Conn.

AMERICAN CHAIN DIVISION
AMERICAN CHAIN & CABLE

In Business for Your Safety

▼ REPRINT—Ideas to IEN-6444 ▼

(even at 1800 F.!) Try this Amazing Money Saver

FREE Test Sample
of the NEW FEL-PRO
C-5
"HI-TEMP"
THREAD
COMPOUND

CUT costly stud breakage, heater dismantling time, pitting of metal surfaces!

Will it take an hard and a hot [illegible] to test the new Fel-Pro C-5 "Hi-Temp" Thread Compound? [illegible] compound [illegible] on [illegible] and [illegible] steels. [illegible] money saving [illegible] by the [illegible] industrial [illegible] and power [illegible]. [illegible] Keeps more [illegible] regardless of [illegible]. In [illegible] saves [illegible] and [illegible] steel [illegible]. One [illegible] company reports that [illegible] has [illegible] from [illegible] hours, by the use of Fel-Pro C-5 "Hi-Temp." Why not see what "Hi-Temp" can do for you . . . get your free sample and complete data sheets now [illegible]

Eliminates Pitting of Stainless and Alloy Steels at all Temperatures!

FELT PRODUCTS MFG. CO.
1223 Carroll Ave., Chicago 7, Illinois

IEN - 6449

AMAZING, NEW, WATERPROOF, GLASS-REINFORCED PAPER
GLAS-KRAFT
PROVIDES POSITIVE ALL-WEATHER PROTECTION

GLAS-KRAFT IS VERSATILE

GET GLAS-KRAFT

GLAS-KRAFT, Inc.
LONSDALE, RHODE ISLAND
Write today for sample swatches and prices.

IEN - 6450

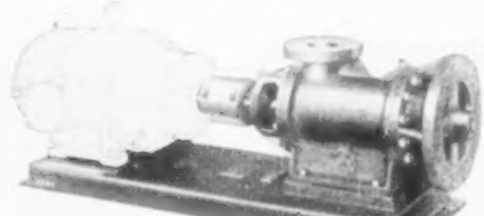
Winning a race against time

FREE CATALOG

WORM GEAR 1/100 to 13½ H.P. | HELICAL GEAR ½ to 8 H.P. | DIFFERENTIAL GEAR (Pat.) 1/10 to 82 H.P.

WINSMITH SPEED REDUCERS WHS
WINFIELD H. SMITH Corp.
DAVIS STREET SPRINGVILLE (Erie County), N. Y.

IEN - 6451



DE LAVAL-IMO
pumps highly viscous cellulose

Pumping high viscosity fluids is no problem with an IMO.

Suction losses, cavitation, turbulence and internal friction are held to an absolute minimum because of the unique form of the IMO rotors, the large suction opening and the axial flow design of this pump.

IMO "I MOVE OIL"
IMO PUMP DIVISION of the
DE LAVAL STEAM TURBINE CO.
TRENTON 2, NEW JERSEY

NEW LITERATURE—Continued
"Check these to keep your file current"

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 38

IEN - 6452

PIPE MARKERS
anyone can use— everyone can read

QUIK-LABEL Pipe Markers conform to American Standards Association Pipe Identification System. ... ***including all materials listed in ASA Standard A13.*** ... ***QUIK-LABELS leave no room for doubt . . . or tragedy.***

FREE SAMPLES

W. H. BRADY COMPANY Established 1914
Manufacturers of Self-Sticking Tape Products
CHIPPEWA FALLS 5, WISCONSIN • *Distributors in 125 Cities*

IEN - 6453

UDYLITE

CATHODE ROD AGITATOR—

THE Udylite CORPORATION
DETROIT 11, MICHIGAN

IEN - 6454

$42 IN U.S.A.

THEY GRIND--NOT JUST RUB!

MADISON-KIPP CORP.
224 Waubesa St., Madison, Wis., U.S.A.

Write for KIPP Air Tool Catalog AT 3006

IEN - 6455

MORE AND MORE "HERMETIC" MANUFACTURERS USE KLIXON PROTECTORS

for trouble-free motor operation

KLIXON
SPENCER THERMOSTAT
Division of Metals & Controls Corp.
207 Forest Street, Attleboro, Mass.

REPRINT—Identify by IEN-6456 if you write the maker

OPERATION... Carter ...MORE SAVINGS!

Carter Micro-Precision Guides Trim Time and Material Waste from Your Bandsawing

CARTER PRODUCTS COMPANY

764 Michigan Trust Bldg., Grand Rapids, Mich.

REPRINT—Identify by IEN-6457 if you write the maker

TRUMBULL (T) ELECTRIC

REPRINT—Identify by IEN-6458 if you write the maker

The American Pulley Company

4240 WISSAHICKON AVE. PHILADELPHIA 29, PA.

NAME TITLE
COMPANY
ADDRESS
CITY STATE

NEW LITERATURE—Continued

"Designations or titles to help you check"

GAGES — [illegible] IEN-6463

GAGES — [illegible] IEN-6464

GAGES — [illegible] IEN-6465

GAGES — [illegible] IEN-6466

GRINDING — [illegible] IEN-6467

GRINDING — [illegible] IEN-6468

GRINDING — [illegible] IEN-6469

GRINDING — [illegible] IEN-6470

GRINDING — [illegible] IEN-6471

HARD FACING — [illegible] IEN-6472

HARD FACING — [illegible] IEN-6473

HEAT TREATING — [illegible] IEN-6474

HEATING — [illegible] IEN-6475

INDICATORS — [illegible] IEN-6476

JACKS — [illegible] IEN-6477

LAYOUT — [illegible] IEN-6478

LIGHTING — [illegible] IEN-6479

LUBRICATING — [illegible] IEN-6480

LUBRICATING — [illegible] IEN-6481

All Makers of These And All Other Products Are Listed In THOMAS REGISTER — Descriptions — Ratings — See Page 58

REPRINT—Identify by IEN-6459 if you write the maker

Here's Equipment Built to Stand Up Under Your Production Requirements for

METERED PRESSURE PUMPING

of Such Chemicals as:

SULPHURIC ACID • SODIUM HYDROXIDE
LIQUID CHLORINE • HYDROCHLORIC ACID
SLURRIES • CHLORINATED HYDROCARBONS
HYDROGEN PEROXIDE • NITRIC ACID
HYDROFLUORIC ACIDS • OLEUM • PROPANE
CYANIDE COMPOUNDS • ETHYLENE • FREON

- NO STUFFING BOX OR RUNNING SEAL
- POSITIVE DISPLACEMENT PISTON MEASUREMENT
- FLOW RATE ADJUSTABLE WHILE IN OPERATION
- MANUAL OR AUTOMATIC CONTROL

Lapp PULSAFEEDER

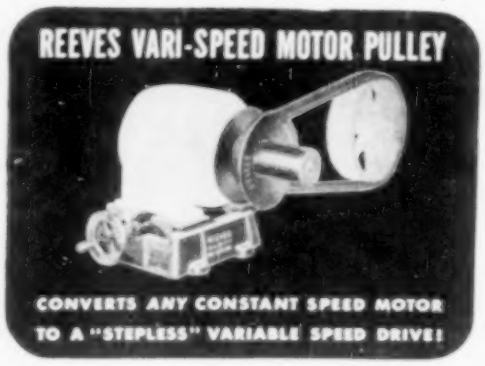
PISTON-DIAPHRAGM CHEMICAL PROPORTIONING PUMP

WRITE for Bulletin [illegible] with [illegible] and specifications

LAPP INSULATOR CO. INC. PROCESS EQUIPMENT DIVISION 242 MAPLE STREET LE ROY, N.Y.

REPRINT—Identify by IEN-6460 if you write the maker

REEVES VARI-SPEED MOTOR PULLEY



CONVERTS *ANY* CONSTANT SPEED MOTOR TO A "STEPLESS" VARIABLE SPEED DRIVE!

For Stepless Speed Adjustability Within 4:1 Range. Sizes to 10 Horsepower

For complete details, send for FREE Catalog

REEVES PULLEY COMPANY · COLUMBUS, INDIANA

Recognized Leader in the Specialized Field of Speed Control Engineering

REPRINT—Identify by IEN-6461 if you write the maker

Planning for Inventory?

Rent
Our
Counting
Scales

Largest stock of latest types

Delivery, setup, pickup

Any quantity—

Any rental period—

Any location—

Chicago and East

Send for Catalog "R"

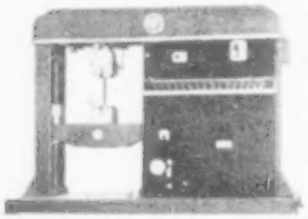
JOHNSON SCALE CO.

74 Walnut St. Newark 5, N. J.

REPRINT—Identify by IEN-6462 if you write the maker

YOU SAVE TIME AND MONEY TESTING IN YOUR OWN SHOP

(TENSILE · COMPRESSION · FLEXURE · SHEAR · TRANSVERSE)



NATIONAL FORGE Table UNIVERSAL TESTER

For Full Information Write

TESTING MACHINE DIVISION

NATIONAL FORGE AND ORDNANCE COMPANY

Dept. E.N. Irvine, Warren County, Penna.

IEN-6463

Here's an "8-Hour Day" Safety Goggle . . .

AO Plastic Goggle

IT'S LIGHT, ATTRACTIVE, COMFORTABLE

American Optical
SAFETY PRODUCTS DIVISION

IEN-6464

For greater safety under foot, in your plant and on your products

Inland 4-Way Safety Plate

Firesafe

Safe Footing

Easy To Fabricate

Easy Assembly

INLAND

STOCKED BY LEADING STEEL WAREHOUSES

INLAND STEEL COMPANY, Dept. IEN-11
38 So. Dearborn St., Chicago 3, Ill.

New Bulletin with New Ideas—Just Out! Return It. Complete engineering and application data. Send for it!

NEW LITERATURE—Continued

"Subjects correspond to product descriptions"

AUTOMATIC CONTROLS

BOILERS

BRAZING

CABINETS

CHEMICALS

CLEANING

COLLECTORS

CONTROLS

CRANES

DUST COLLECTORS

ELECTRICAL

ELECTRONICS

FIRE

FLOORS

FLUORESCENT

FOUNDRY

GEARS

GLASS

GRINDING

HEATING

HOISTS

INSTRUMENTS

INSULATION

LABORATORY

LIGHTING

LUBRICATION

MACHINE TOOLS

MATERIAL HANDLING

METERS

MICROSCOPES

PAINTING

PIPE

PLASTICS

PRESS TOOLS

PRESSES

PROTECTING

PROTECTIVE

PUMPS

RECORDING

SAFETY

SCALES

SHOP EQUIPMENT

STEEL

TANKS

TOOLS

VALVES

WELDING

WIRE

IEN-6466

TM 596 KD 341A KD 367

One of these 3 Methods Can Cut Your Production Costs

KD 341A—Sched-U-Gram Production
KD 367—Up & Down Charts for Production
TM 596—Time, Motion and Methods for Production

Remington Rand The First Name in Business Systems

IEN-6467

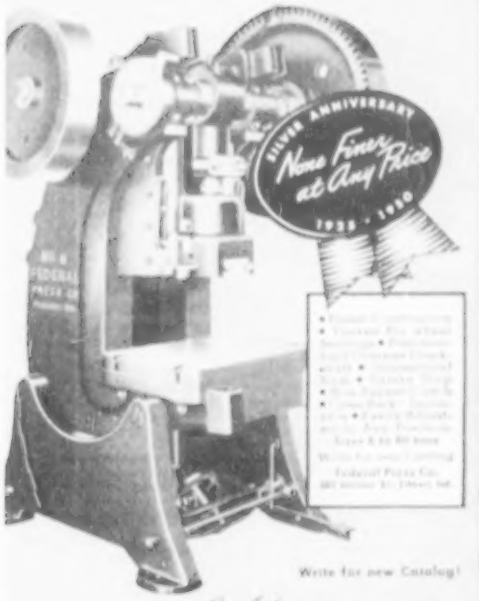
Be fresh... stay fresh

wear a **DUPOR No. 20**
Water-Cooled Respirator

Sample sent $2.25 pp

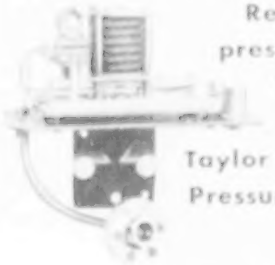
H. S. COVER
South Bend, Ind.

IEN-6468



FEDERAL PRESSES
31 YEARS OF QUALITY CONSTRUCTION

IEN-6469



Read changing pressures instantly 1000 ft. away with new Taylor "TRANSAIRE" Pressure Transmitter

7 IMPORTANT ADVANTAGES:

TAYLOR INSTRUMENTS MEAN "ACCURACY FIRST"

NEW LITERATURE—Continued

"Newness of each bulletin is checked"

REFRIGERATING

REGULATORS

HOISTS

RUBBER PRODUCTS

AIR CONDITIONING

INSULATING

INSULATING

SERVICES

STAINLESS STEEL PRODUCTS

STORING

STORING

STORING

TAPES

TESTING

TESTING

TESTING

TESTING

TESTING

TEXTILES

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 50

IEN-6470

LANSING SPARTAN TRUCK

LANSING COMPANY

TRUCKS · TRAILERS · BARROWS · CASTERS · CARTS

"Keep Your Products on Wheels"

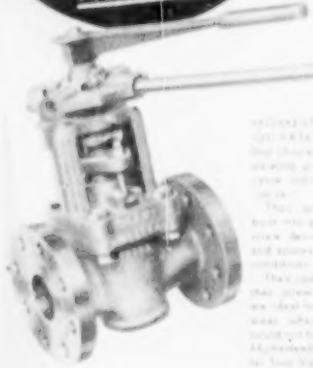
MAIN OFFICE AND FACTORY

LANSING, MICHIGAN

IEN-6471

This HOMESTEAD VALVE Opens or Closes Instantly

It's STICK-PROOF because it's LEVER-SEALD



HOMESTEAD VALVE MANUFACTURING CO.

"Serving Since 1892"

P. O. BOX 55 CORAOPOLIS, PA.

IEN-6472

Uncork Bottle necks

IEN-6473

Streamlined— AIN'T SHE?

SIZES: 1", 1½", 2", 3"
CAPACITIES: 5 to 450 G. P. M.
HEADS: 15 to 500 feet
MOTORS: 1750 and 3500 RPM, ¼ to 40 horsepower
MATERIALS: Standard, All Iron, All Bronze, or special to meet unusual requirements

WARREN PUMPS

WARREN STEAM PUMP COMPANY, INC.
66 Bridge Avenue Warren, Massachusetts

IEN-6474

Zenith

Performance . . .

Zenith means "highest point". The clearly deserves Zenith depends—on the dial—as shown by records of long trouble-free maintenance service in widest range of control uses.

Zenith automatic controls

WRITE NOW FOR COMPLETE CATALOG

ZENITH ELECTRIC CO.
146 W. WALTON ST., CHICAGO 10, ILLINOIS

IEN-6475

Built-in OPERATING ASSURANCE

FOR BUILDERS OF ELECTRIFIED EQUIPMENT!

Nowhere does WESTON *dependability* and *value* pay bigger returns than on the panels or controls of electrical equipment. By consistently *telling the truth*, they help assure efficient performance of the equipment in users' hands . . . where *to make it* depends on instrument performance. Moreover, the name WESTON on a panel instrument gains instant recognition . . . helps build buyer acceptance for the products on which they are installed. Available in types, sizes, ranges and styles for all needs. Ask your nearest WESTON representative for all the facts, or write for bulletin A-7. B. WESTON Electrical Instrument Corporation, 658 Frelinghuysen Avenue, Newark 5, New Jersey.

WESTON Panel Instruments

IEN-6477

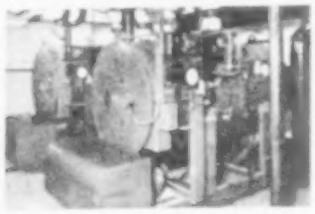
$1,000 Per Month SAVED
$20,000 Annually SAVED

THESE ARE ACTUAL CASE HISTORIES

HOW MUCH CAN YOU SAVE
with a modern STEAM-PAK
fully automatic Steam Generator

SAVE FUEL
with oil, gas
or combination

SAVE LABOR
with fully automatic operation



Steam Pak Generators are built in capacities from 15 H.P. up for low or high pressure steam or hot water, for light or heavy oil, combination gas and oil or straight gas. CAN YOU SAVE MONEY with a Steam-Pak? Ask a qualified engineer—a York-Power Distributor, or call

YORK-SHIPLEY
INDUSTRIAL DIVISION
718 Jessop Place, York, Pa. Phone 7861

IEN-6478

CHA-S-OFF

Paint & Varnish Remover
initially for the Government

Now *available* for industrial use to remove paint, varnish, oil base coatings from metals and certain non-metallic surfaces.

Patented formula based on a chlorinated solvent has been supplied to Government agencies for several years under Federal Specifications TT-R-281a.

Creamy white liquid applies by brush, spray, dip. It softens the paint in 5 to 20 minutes, is removed by scraping or wiping. Surface needs no washing or cleaning, can be painted since the material has dried.

In 1, 5 and 55-gallon containers for industrial use or on contract for repack and commercial distribution.

NON FLAMMABLE
CORROSIVE
EXPLOSIVE

Chasco, Inc.
28 E. LANVALE ST., BALTIMORE 2, MD.

IEN-6479

SPECIAL PURPOSE
LOCKS
by EAGLE

EAGLE PADLOCK No. 4378GC
for outdoor service, especially suited for warehouses, tool sheds, autos, tool boxes, machines and other outdoor heavy-duty applications. A 2½" padlock made of malleable iron, stainless steel and zinc plated. 5" steel shackle. Lock and shackle Can be keyed alike, master-keyed and grand master-keyed.

EAGLE LOCKS
The EAGLE LOCK Company
Terryville, Conn.

AMERICA'S FIRST LOCKMAKERS • SINCE 1833

NEW LITERATURE — Concluded

Send us your own new literature for review

THERMOSETTERS — Electric, with adjustable temperature control, for use in molding, curing, vulcanizing, etc. Capacities from 1 to 5 tons. Bulletin 1-1. IEN-6000

THREADING — Chart showing the proper tap drill sizes for all standard threads. Bulletin 1-1. IEN-6001

TIMING — Electric, with adjustable time control, for use in molding, curing, vulcanizing, etc. Capacities from 1 to 5 tons. Bulletin 1-1. IEN-6002

TRANSFORMERS — Bulletin 1-1. IEN-6003

TRANSFORMERS — Bulletin 1-1. IEN-6004

TRAPS — Bulletin 1-1. IEN-6005

TRUCKS — Bulletin 1-1. IEN-6006

TRUCKS — Bulletin 1-1. IEN-6007

TRUCKS — Bulletin 1-1. IEN-6008

VALVES — Bulletin 1-1. IEN-6009

VALVES — Bulletin 1-1. IEN-6010

VALVES — Bulletin 1-1. IEN-6011

VENTILATING — Bulletin 1-1. IEN-6012

VENTILATING — Bulletin 1-1. IEN-6013

WALLS — Bulletin 1-1. IEN-6014

WEIGHING — Bulletin 1-1. IEN-6015

WELDING — Bulletin 1-1. IEN-6016

WELDING — Bulletin 1-1. IEN-6017

WELDING — Bulletin 1-1. IEN-6018

All Makers of China And All Other Products Are Listed in THOMAS REGISTER — Description — Ratings — See Page 30

IEN-6480

NEW! BRADY MASKS

Die-Cut to Sizes and Shapes You NEED...

Self-adhesive BRADY MASKS will save you time and dollars in spray-painting, sanding and sandblasting operations. Die-cut to the *exact* shape and size you require, fast-fitting BRADY MASKS protect name plates, machined parts, plated and polished surfaces, holes, threads, and other areas from paint, pitting solutions and damage. They eliminate costly hand cutting, use of cut-off materials and expensive metal shields. Made from "Scotch" Brand Masking Tapes, they are fast to apply and fast to remove after use. Low in cost, BRADY MASKS will bring immediate worthwhile savings to your plant. Circles, squares and rectangles stocked in many sizes. Write today for useful literature and FREE SAMPLES.

BRADY-MILWAUKEE CO.
(Div. of W. H. Brady Co., Chippewa Falls, Wis.)
210 W. Washington St., Milwaukee, Wis.

FREE SAMPLES

IEN-6481

Now try THE STA-WARM METHOD OF MELTING COMPOUNDS

Sta-Warm ELECTRIC CO.
560 N. CHESTNUT ST. • RAVENNA, OHIO

IEN-6482

DICK 960 A B DICK 960 A B DICK 960

NEW A. B. DICK MIMEOGRAPHS

black-on-white **COPIES** or colored copies of anything typed, written or drawn . . .

produced **FAST** on most all paper and card stocks at speeds ranging up to 180 copies per minute . . .

and **EASY** on today's A. B. Dick mimeographs with many new features and improvements for more efficient operation.

WRITE TODAY for full details

A·B·DICK COMPANY
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For use with all makes of suitable stencil duplicating products.

IEN-6483

THERMOBLOC

The Flexible Self-Contained

INDUSTRIAL HEATING UNIT

Shipped from the factory complete, ready to go to work on a wide variety of heating applications. THERMOBLOC may be just the answer you have been looking for.

Write for data and other going heavy information on heating and power.

THERMOBLOC DIVISION
PRAT-DANIEL CORPORATION
Manufacturers of Thermix Power Equipment
78-7 Water Street E. Port Chester, Conn.

IEN-6484

IEN-6485

IEN-6486

IEN-6487

TESTING . . Oscilloscope mounts 24 by 18 in. projection screen

Source: TELEVISION EQUIPMENT CORP
238 William St., 5th Floor, New York 7, N. Y.

IEN-6488

PRESS . . Open back inclinable, rates 7½ ton, 9 in. shut height

Source: BENCHMASTER MFG. CO.
2950-54 W. Pico Blvd., Los Angeles 6, Calif.

IEN-6489

ADHESIVES . . For can labeling the subject of booklet on troubles and remedies

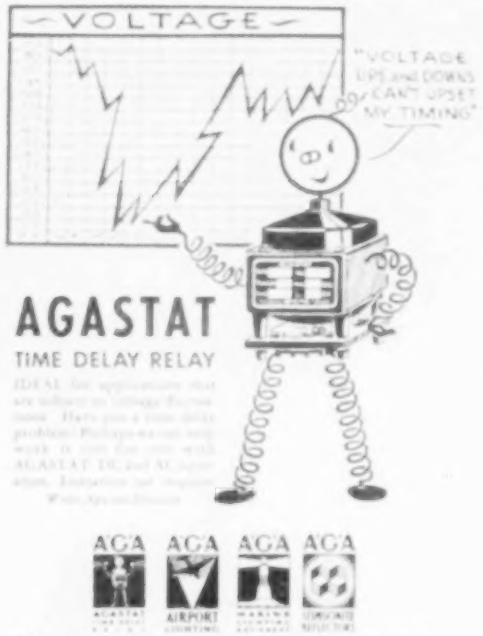
Source: X-Acto
230 Madison Ave., (16th St.), New York 16, N. Y.

Revised edition of "Successful Can Labeling" is a 24-page pocket book of that information with troubles and remedies such as wrinkles, "falling off," "bleeding," poor adhesion, or coverage. Factors to look up when having inexperienced men are presented on hard-wall wrinkle labeling.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 18

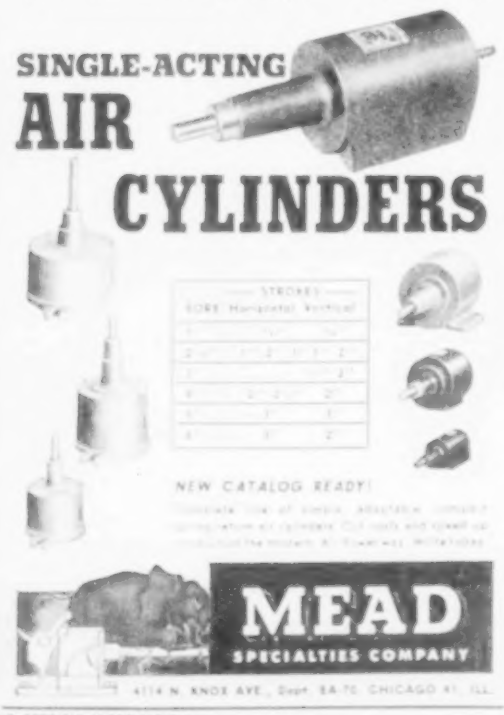
IEN-6490

IEN-6491



IEN-6492

IEN-6493



▼ BRIEFITS—Identify by IEN-6494 if you write the maker ▼

Many Industries Use

METLKOR

CYLINDER BRUSHES

—when ARRANGEMENT OF MATERIALS is required in manufacturing.

FOR EXAMPLE

HAVE YOU AN ARRANGING OPERATION TO PERFORM?

THE MOST ECONOMICAL BRUSHES YOU CAN BUY AND USE

M. W. JENKINS' SONS, INC.

▼ BRIEFITS—Identify by IEN-6495 if you write the maker ▼

PROTECT

your expensive dies and machine parts

USE

ACME

RED OR BLUE LABEL

PRECISION

DOWEL PINS

Acme Dowel Pins break before bending or mushrooming—thus saving expensive equipment from run through misalignment. Order standard sizes from stock. Attractive prices on special sizes and large quantities.

WRITE FOR DESCRIPTIVE CIRCULAR

Acme Industrial Company

Makers of Standardized Jig & Fixture Bushings

215 N. Leffin Street • Chicago 7, Illinois

THE SERVICE SHOP TO INDUSTRY FOR MORE THAN 25 YEARS

▼ BRIEFITS—Identify by IEN-6496 if you write the maker ▼

How to get 25% to 40% FASTER CUTTING with your Power Saws

FREE BOOK on Modern Saw Maintenance

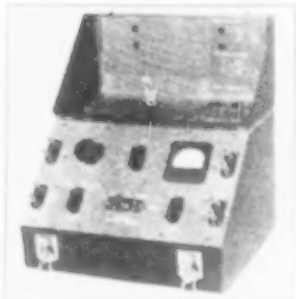
Mail Coupon Today

FOLEY MFG. CO. 2105 Foley Bldg. Minneapolis, Minn.

▼ BRIEFITS—Identify by IEN-6497 if you write the maker ▼

TESTING . . Electronic equipment for strain gage signals on oscilloscope

Source: BALDWIN LOCOMOTIVE WORKS
Paschall Post Office, Philadelphia 42, Pa.



Model BA-1

The equipment

The modulator

▼ BRIEFITS—Identify by IEN-6498 if you write the maker ▼

CALCULATING . . Materials slide rule reads work weight per thousand pieces

Source: H. R. POTTER CO.
P. O. Box 215-A, Montclair, N. J.

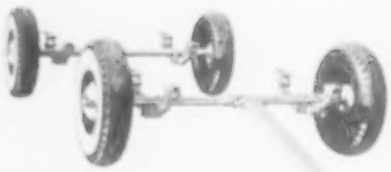
List price

The slide

The rule

All Makers of Things And All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 58

▼ BRIEFITS—Identify by IEN-6499 if you write the maker ▼



FAYETTE

Precision Built UNDERCARRIAGES

CUT ASSEMBLY COSTS OF PORTABLE EQUIPMENT

By simply making the necessary basic or welded attachments, your mobile or portable equipment is ready to roll on a precision built Fayette Undercarriage.

Loads move easier, stack higher, because of precision construction.

Save money three ways . . . Simplify organization of comparable equipment. Longer life, trouble-free service. Lower overall cost.

Tell us your equipment needs and our engineers will recommend a practical solution to your problem.

WRITE TODAY

FAYETTE MANUFACTURING CO.

220 East St. • Fayette, Ohio

▼ BRIEFITS—Identify by IEN-6500 if you write the maker ▼

Rubber Bumpers

What do you need?

Largest and most complete line in the U.S.A. UNUSUAL STYLES or sizes every one made. Top value and quality at prices unusual.

Take it up with

THE 44 PAGE CATALOG

LAVELLE Rubber Company

1877 WEST HUBBARD STREET, CHICAGO 22, ILLINOIS

▼ BRIEFITS—Identify by IEN-6501 if you write the maker ▼

DEPEND ON—INSIST ON

Starrett

SATIN CHROME

OUTSIDE MICROMETERS

INSIDE MICROMETERS Tubular Rods

INSIDE MICROMETERS Solid Rods

MICROMETER DEPTH GAGES

All 4 with Satin Chrome Finish

GET YOUR FREE COPY

Starrett

Standard of Precision

Buy Through Your Distributor

THE L. S. STARRETT CO. ATHOL, MASSACHUSETTS, U.S.A.

▼ BRIEFITS—Identify by IEN-6502 if you write the maker ▼

PLATECOIL

Replaces Pipe Coil

FOR HEATING, COOLING OR DRYING

PROVIDES (4) OUTSTANDING SAVINGS

1. More Prime Surface for More Efficient Heating
2. Develops Attack Heat for Quick Start. (As Much as 50% Faster Than Pipe Coil.)
3. Takes Half the Space. Weighs Half as Much as Pipe Coil.
4. Platecoils Are Easily Cleaned or Replaced in Minutes. No Dismantling. No Tank Dumping.

Full advantages of the complete engineering assistance offered by Gold Bond on only one will cost less than Heavier programs.

Send for complete technical manual and descriptive Bulletin No. P56

PLATECOIL

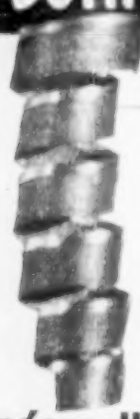
Division of GOLD-BOND BLDG. CO.

KENSINGTON 4, MINNESOTA

IEN - 6503

NATURE provides trees with an armor of protective BARK

BOTH give protection!



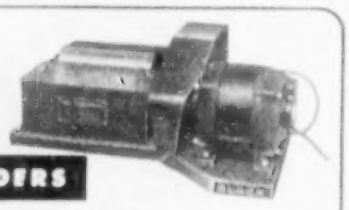
INGERSOLL provides carbon steel sheets with a protective armor of SOLID STAINLESS STEEL

INGACLAD
STAINLESS-CLAD STEEL

Ingersoll STEEL DIVISION
BORG-WARNER CORPORATION
310 South Michigan Avenue • Chicago 4, Illinois

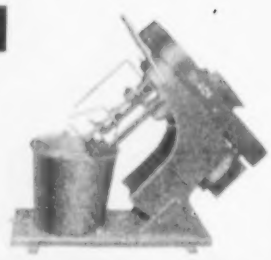
IEN - 6504

PORTABLE...MOTOR DRIVEN



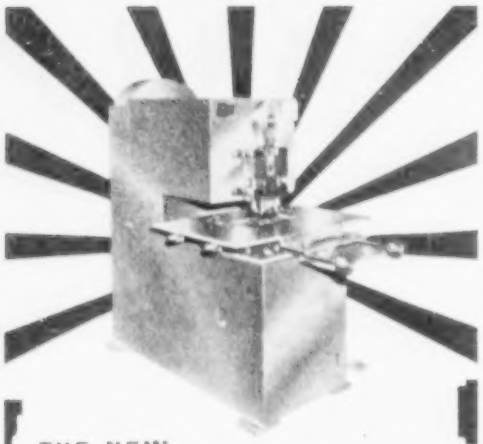
SPREADERS

MIXERS



THE BLACK BROTHERS CO., INC.
MENDOTA, ILLINOIS, U. S. A.

IEN - 6505



THE NEW
SEMCO NIBBLER PRESS
PUNCHES HOLES ANY SHAPE ANY SIZE UP TO 12" X 4½" AT ONE SETTING
NO SPECIAL DIES ARE NEEDED

SERVICE MACHINE COMPANY
INCORPORATED
200 MILLER STREET, ELIZABETH, N. J.

IEN - 6506

DRYING . . Dielectric equipment bakes foundry cores, 4 ton per hour

Source: INDUCTION HEATING CORP.
179-83 Wythe Ave., Brooklyn 11, N. Y.

Model M 7200 is a [illegible] baking unit [illegible] the single [illegible] shown. This model [illegible] 11" wide [illegible] width with a maximum height of 20 in. for [illegible] core. The work [illegible] is supplied for capacity of 4 tons per hour [illegible] Other models [illegible] Write for Bulletin [illegible]

IEN - 6507

INSULATING . . Flexible varnish, impregnated coil leads can be bent

Source: IRVINGTON VARNISH & INSULATOR CO.
4-8 Argyle Terrace, Irvington 11, N. J.

Armatures, stators, relays, transformers

No. 122 is a [illegible] varnish impregnated for the [illegible] coil leads. It is supplied as a [illegible] varnish. Characteristics: high [illegible] strength, resistance to moisture [illegible] and are acceptable. It will generally [illegible] coil leads. Dielectric Strength [illegible] volts per mil. Operating Temp. [illegible] Price: [illegible] per gal. [illegible] per pint. [illegible] per [illegible]

IEN - 6508

VALVE . . Liquid pressure regulator for non-corrosive, liquids, oil, water

Source: C. A. NORGREN CO.
220-24 Santa Fe Drive, Denver 9, Colo.

The valve parts are [illegible] of [illegible] 214 [illegible] regulator operates [illegible] with a [illegible] spring-loaded baffle below the pressure [illegible] diaphragm. The [illegible] pressure [illegible] back on [illegible] diaphragm. The disadvantage is [illegible] for a spring and adjusting screw.

Line pressure [illegible] at [illegible] lb. can be reduced to zero [illegible] at [illegible] lb. [illegible] at [illegible] lb. [illegible] 10 lb. [illegible] 5 to 125 pounds. Dimensions of the assembly [illegible] as in the [illegible]

As Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 38

IEN - 6509

IRON BULWARK
AGAINST CORROSIVE FLUIDS

Fairbanks
all iron gate valves

Fig. 0904 ALL IRON GATE VALVE 175# SWP 200# WOG Solid Wedge Taper Seat Malleable Iron Seat Rings 2"-12" Sizes

made of high-test alloy iron to withstand the action of many of the strongest chemicals, give long service under severe operating conditions. These, like all other Fairbanks Valves are low in maintenance, easy to operate and long lasting in service . . . a real answer to corrosion problems today.

For other types of corrosive fluids such as dry cushion oil, acids, alkali materials and steel hydrocarbons, use FAIRBANKS BRONZE SOLDER END AND FAIRCO BRAZE (Silver Brazed) Valves.

For full details consult your distributor or write direct.

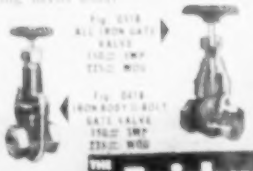


Fig. 0918 ALL IRON GATE VALVE 150# SWP 250# WOG

Fig. 0918 IRON BODY BRONZE GATE VALVE 150# SWP 250# WOG

THE Fairbanks COMPANY
393 LAFAYETTE STREET • NEW YORK 3, N. Y.
Branches: New York 3 • Pittsburgh 22 • Boston 10 • Detroit, Mich.

CASTERS • TRUCKS • VALVES • BARB & HOSE UNIONS

IEN - 6510

WANTED
Problems to be solved by MASONITE HARDBOARDS

These modern, easy-to-fabricate panels of "wood made better" are saving money and boosting quality in hundreds of plants.

Here are some of the 28 definite reasons why:

- They are dimensionally stable.
- Wood, veneer, glass, leather and most plastics can be laminated readily to them.
- They can be die-cut.
- They won't rust or corrode.

Masonite Hardboards come in 30 different types and thicknesses for industry. For complete technical data and suggestions about your production problems, write—

MASONITE CORPORATION
111 W. WASHINGTON ST. • CHICAGO 2, ILLINOIS

IEN - 6511

cut costs on every cleaning job with

cold steam

✓ no back splash
✓ blasts stubborn dirt
✓ harmless to finest finish

HYDRO-AIR PRESSURE WASHER $9.95

Connects to regular or hot water at any water supply. Powerful stream of air and water blasts heavy oil and grease in cargo sheds and other spots with a penetrating force. Economic efficiency for wash and food processing, maintenance and repair, dairy, grocery and general cleaning operations.

Order through your supplier or direct. Washer will be sent prepaid.

D & M PRODUCTS, INC., 26 N. Raymond, Pasadena, Calif.

IEN - 6512

Vibration Problems Solved Without Design Changes

In many cases vibration trouble is caused by loosened and soft bolt connections. This problem can often be solved with a simple lock-nut replacement.

With no changes in the design of your product or its assembly procedure, self-locking Elastic Stop Nuts can be substituted directly for standard nuts and will function as regulation nuts. Elastic Stop Nuts are made with an elastic locking insert. Elastic Stop Nuts are non-metallic locks or seals with excellent anti-corrosive properties. The famous Red Elastic Locknut is now thousands and many parts are [illegible] specifications of [illegible] aircraft.

On machine tools, transmitting equipment, portable tools, [illegible] and [illegible] equipment Elastic Stop Nuts are solving vibration problems every day. In addition Elastic Stop Nuts solve problems of: (1) [illegible] bolts [illegible] proper load [illegible] (2) setting and maintaining proper spring [illegible] adjustments (3) preventing lock threads against [illegible] (4) [illegible] the [illegible] [illegible]

Elastic Stop Nuts come in [illegible] Elastic Stop Nut Corporation, [illegible] Union, N. J.

IEN-6513

EX-CELL-O *Spindles*

"STEPPED UP PRODUCTION TREMENDOUSLY!"

That's what an electrical manufacturer says about a group of Ex-Cell-O Precision Spindles he purchased. These were of the high frequency, inbuilt motor type, pictured above. If you use precision grinding spindles send for the Ex-Cell-O Spindle Catalog today—no obligation of course. For a quotation on special spindles just send a sketch with basic dimensions and state the speed and horsepower required.

XLO

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

IEN-6514

Write for Catalog
OF USES
and SPECIFICATIONS

GENERAL
Industrial Pneumatics

ADD THESE 6 SELLING POINTS TO YOUR PRODUCT

SAVE
- TIME
- LABOR
- FLOORS

REDUCE
- BREAKAGE
- MAINTENANCE
- COSTS

Rigid CASTER FORKS *Swivel*

Wide-base caster forks engineered to disperse heavier loads without adding dead weight to equipment. Available in number of sizes and identical pairs.

More AIR VOLUME • *More* STABILITY • *More* LOAD CAPACITY
DELIVERS *Long Mileage* IN HI-SPEED SERVICE

SEND FOR CATALOG . . . DEPT. 3
THE GENERAL TIRE & RUBBER CO. AKRON, OHIO

IEN-6516

BORING . . Adjustable head with adjustment maximum at 1/2 inch

Source: FLYNN MFG. CO.
441-S Baltic St., Detroit 26, Mich.

IEN-6517

CALCULATING . . Metal slide rule, measures 5 in., equivalent to 10 in.

Source: PICKETT & ECKEL INC.
175 S. Wabash Ave., Chicago 3, Ill.

IEN-6518

TESTING . . Pair of pressure gages for refrigerator checking by serviceman

Source: JAS. P. MARSH CORP.
2503 Howard St., Skokie, Ill.

IEN-6519

new Moto-Bug

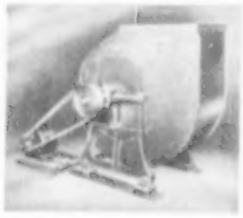
- Carries up to 1200 lbs. on sturdy 4-ft. flatbed platform. Low cost . . . quickly pays for itself in *more production* per man-hour.
- Operator rides on back step . . . has positive steering for easy spotting . . . reverse power for back-up. No push, no pull, no operator fatigue.
- Travels 1½ to 4 m.p.h. forward and reverse . . . takes full load up 20% ramps. Has standard-make, 5 h.p., 4-cycle gasoline engine.
- Interchangeable 16 cu. ft. hopper extends usefulness for handling metal shavings, borings, scrap, and other bulk materials. Send for complete facts NOW on the savings Moto-Bug offers you.

KM29

KWIK-MIX COMPANY PORT WASHINGTON, WIS. (Kwikmix Subsidiary)
Also Mfrs. of: CONCRETE • PLASTER • BITUMINOUS MIXERS

IEN-6520

Pick Your "C.F.M.s" in This Efficient Fan!



"Buffalo"
LIMIT-LOAD GIVES YOU EXACT CHOICE

You have a complete choice of closely graduated sizes, 800 c.f.m. to over half a million c.f.m.! YOU GET JUST THE AMOUNT OF AIR NEEDED—you won't paying for a much larger fan than the job calls for. And with "Buffalo" Limit-Load Fans, you are buying many years of quiet, efficient-free air service for ventilating, exhausting, air conditioning service. WRITE FOR COMPLETE INFORMATION.

BUFFALO FORGE COMPANY
476 Broadway, Buffalo, New York
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

"Buffalo" **LIMIT-LOAD FANS**

IEN-6521

NEW *Empco* JACK

Gives you Quick Accurate Machine Leveling and it ABSORBS *VIBRATION*

VI-SORB
Mounting Pads

EMPCO PRODUCT

THE ENTERPRISE MACHINE PARTS CORPORATION
2737 JEROME AVENUE • DETROIT 12, MICHIGAN

IEN-6522

A handful of hands turns out more jobs at LOWER

ROTARY IMPACTOOL

YOU CANNOT STALL AND BURN OUT THE MOTOR

YOU GET NO KICK, NO TWIST

YOU CAN SAVE UP TO 90% OF NUT RUNNING TIME ALONE

Seeing is Believing Ingersoll-Rand
11 Broadway, New York 4, N. Y.
Ask your distributor for a demonstration of this amazing, time-saving, labor-aiding Impactool

▼ REPRINT—Ideas to IEN-6523 ▼

▼ REPRINT—Ideas to IEN-6524 ▼

F-H AIRSLIDE FOR CONVEYING FINE, DRY MATERIALS

• NO MOVING PARTS •

FULLER COMPANY
CATASAUQUA, PA.

fuller

▼ REPRINT—Ideas to IEN-6525 ▼

If you operate hand-fed drill presses in your plant you can usually cut costs 25-30% or more by equipping them with Bellows "Controlled-Air-Power" Feeds.

Easily and quickly installed on the star wheel shaft of any standard drill press. Feeds spindle with perfectly controlled thrust and feeding rate; eliminates operator fatigue, maintains uniform high production throughout entire shift; cuts drill breakage, lengthens drill life. Write for Bulletin DF-105-R Today.

Dept. IEN/50

The Bellows Co.
AKRON, OHIO

CONTROLLED-AIR-POWER FOR FASTER, SAFER, BETTER, AND LOWER-COST PRODUCTION

▼ REPRINT—Ideas to IEN-6526 ▼

SHEARING . . Pneumatic slitting head for cloth, paper, plastic, rubber sheet

Source: CAMERON MACHINE CO.
65 Poplar St., Brooklyn 2, N. Y.

▼ REPRINT—Ideas to IEN-6527 ▼

WATER PROOFING . . Plastic materials seal the surface of thermal insulation

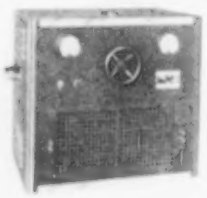
Source: INSUL-MASTIC CORP. OF AMERICA
1129-41 Oliver Bldg., Pittsburgh 22, Pa.

Four page folder
Matchless Protection
describes, illustrates

▼ REPRINT—Ideas to IEN-6528 ▼

TESTING . . Electronic equipment for stabilized and regulated dc. from ac.

Source: SUPERIOR ELECTRIC CO.
92 Hannon Ave., Bristol, Conn.



Variell is new electronic equipment to deliver dc at a voltage in 6 to 30 volts and 15 amp. (up to 90 to 120 watts) from an source. Regulation [illegible] and adjustable output [illegible] Transformer [illegible] 5 and 30 cycle. [illegible]

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 26

▼ REPRINT—Ideas to IEN-6529 ▼

FIND FLAWS in METALS AND METAL PARTS
Swiftly
Surely
Economically

SPERRY
Ultrasonic
REFLECTOSCOPE

[illegible]

ASK ABOUT OUR LEASE AND COMMERCIAL TESTING SERVICES

Sperry

SPERRY PRODUCTS, INC.
Danbury, Connecticut
Phone: Danbury 8-2161

ALSO MANUFACTURERS OF HYDRAULIC CONTROLS AND SELF-SEALING COUPLINGS

▼ REPRINT—Ideas to IEN-6530 ▼

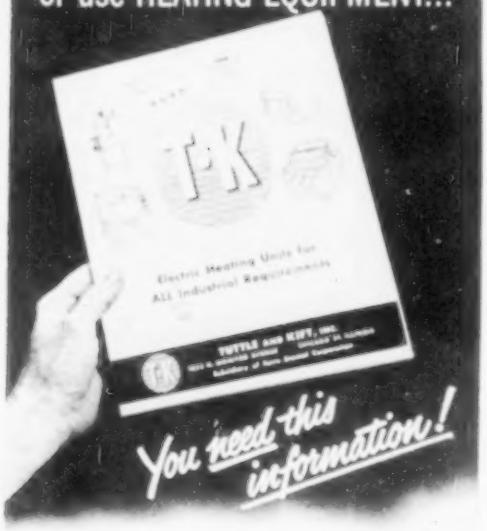
Famous New SHOT-GRIT Cuts Costs in Chicago!

[illegible]

Hickman, Williams & Co.
INCORPORATED
CHICAGO · DETROIT · CINCINNATI · ST. LOUIS · NEW YORK
CLEVELAND · PHILADELPHIA · PITTSBURGH · INDIANAPOLIS

▼ REPRINT—Ideas to IEN-6531 ▼

If you design, specify, maintain or use HEATING EQUIPMENT...



Here's "must-have" data for Product Engineers, Plant Engineers, Purchasing Agents, Maintenance Superintendents and Production Managers, information you need to stay on top of your job!

Prepared especially for use in Specification and Performance Sheet form this 12-page catalog contains complete details on Immersion, Duct Type, Unused, Rod Type and other [illegible] Units. You'll find it helpful whether you use [illegible] chemical solutions, pressure [illegible] or a [illegible] application.

[illegible]

Mail this Coupon [illegible]

Heat Engineered to Specific Product Applications

TUTTLE & KIFT, INC. 1422 N. MONITOR AVENUE, CHICAGO 39, ILLINOIS
Subsidiary of Ferro Enamel Corporation

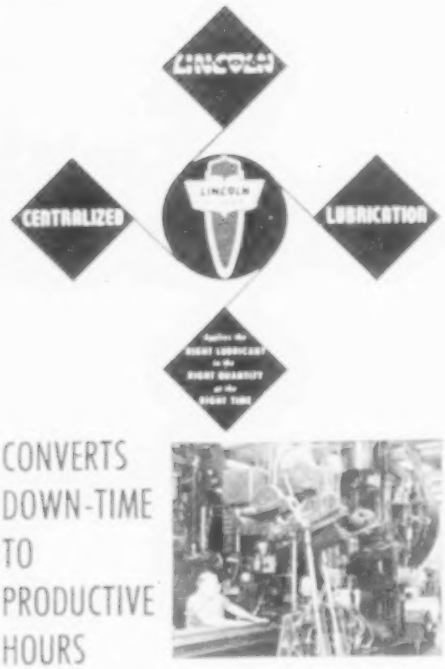
Gentlemen:
Please send me copies of your new Electric Heating Units catalog.
Name
Firm
Address
City Zone State

REFER TO INDUSTRIAL EQUIPMENT NEWS IN YOUR INQUIRIES TO MANUFACTURERS SO THEY CAN SEND SPECIFIC INFORMATION

IEN-6533

THE HOOVER COMPANY

IEN-6534



IEN-6536

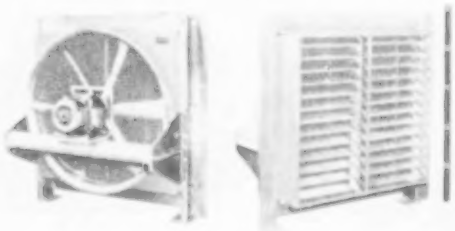
MARKING . . Perforating machine code marks filled heat-sealed bags

Source: AMERICAN PERFORATOR CO.
615-633 W. Jackson Blvd., Chicago 6, Ill.

IEN-6537

COOLING . . Fan equipped radiator for jacket water on a diesel engine

Source: YOUNG RADIATOR CO.
719 Marquette St., Racine, Wis.



IEN-6538

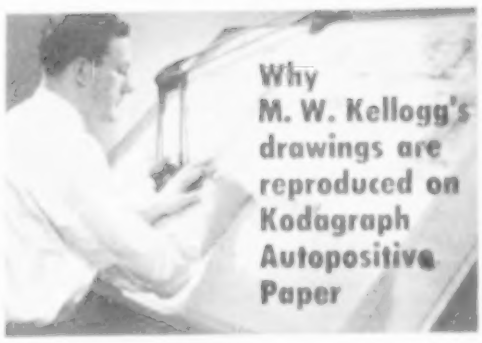
Dunbar Glass Corporation
DUNBAR, WEST VIRGINIA

IEN-6539

EVERY ENGINEER will want a copy of this BULLETIN

HANNIFIN CORPORATION

IEN-6540



It just doesn't pay to take chances

Kodagraph Autopositives are excellent print-making masters

Kodagraph Autopositives are photo-lasting in the files

Learn all about Kodagraph Autopositive Paper

Kodagraph Autopositive Paper

"The Big New Plus" in engineering drawing reproduction

For complete details, write today

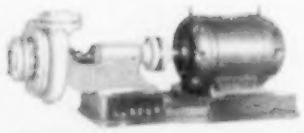
EASTMAN KODAK COMPANY
Industrial Photographic Division,
Rochester 4, N. Y.

Kodak TRADE-MARK

IEN - 6542

PRIMING and NON-PRIMING CENTRIFUGAL ACID PUMPS

Capacities 100 G.P.M. and up. Materials available to resist corrosion by nearly all acids and caustics. Handle air or vapor with liquid when necessary, also small solids in suspension. Simple, dependable. Write for details. Name your problem: kind of liquid, temperature, capacity, pressure, and corrosion life.



THE LABOUR COMPANY, Inc.
1873 Sterling Avenue Elkhart, Indiana, U. S. A.

IEN - 6543

VAC-IT *does all your cleaning JOBS*

The Doyle Vac-It is constructed to handle any cleaning job in your plant efficiently and without the necessity of changing parts. Wet and dry cleaning, the power is in the Vac-It. Dirt and dust are removed from floors and other areas with ease. Combined paper, rags, sawdust, oil, chips, and moisture are quickly cleaned and dust free from cleaning dry and mop wipe with the Doyle Vac-It and Doyle equipment. The Vac-It stands and puts the work in packs it up and removes it from the plant.

The powerful motor in the Doyle Vac-It gives superior fabric filtration and a vacuum of 100 inches of water. The Vac-It will make two cleanings before emptying.

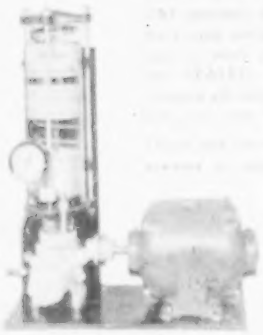
Write for complete data today!

Doyle **VAC-IT**

DOYLE VACUUM CLEANER CO.
2215 Stevens St., S. W. Grand Rapids 7, Michigan

IEN - 6544

Trabon **Leads in AUTOMATIC LUBRICATION**

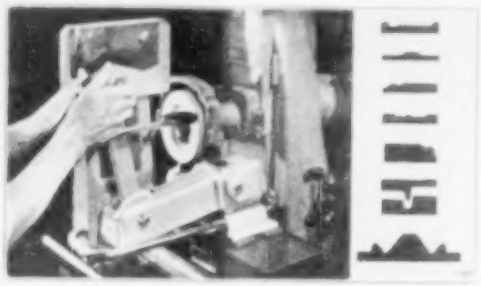


Trabon
OIL AND GREASE SYSTEMS

IEN - 6545

GRINDING . . Dresser attachment forms wheel to a magnified template

Source: PRATT & WHITNEY
49 Charter Oak Blvd., West Hartford 1, Conn.



Diaform [illegible]

The mechanism [illegible]

Bulletin [illegible]

IEN - 6546

CLEANING . . Flexible shaft machine for 1¼ to 3 in. drains to sewers

Source: KOLLMANN MFG. CO.
4800 Peach St., Erie, Pa.

Model K-100-Jr. [illegible]

IEN - 6547

LUG-ALL
All Purpose **WINCH-HOIST**

WEIGHS ONLY 9 LBS., YET LIFTS, PULLS OR LOWERS TO A DISTANCE OF 7½ FT. OR A FOR DISTANCE OF 15 FT.

[illegible]

CAPACITY 1½ TONS

WEIGHT 9½ LBS.

AND IT COSTS ONLY $29.50

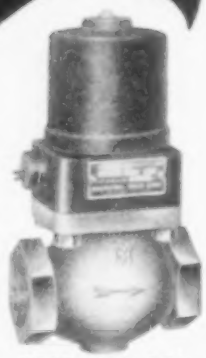
LOWER FIRST COST
LOWER MAINTENANCE COST
THAT'S LUG-ALL

THE LUG-ALL COMPANY
Wyncote, Pa.

IEN - 6548

ELIMINATE COSTLY FLOW FAILURES with MAGNATROL SOLENOID VALVES

- Quick Operating
- Non-Sticking
- Tight Sealing



These three design advantages are your assurance against costly flow failures. Years dependable service, minimum maintenance means corrosive liquids or gases with Magnatrol valves. You can install them quickly and easily in connection with [illegible] thermostats, float and time switches. Every Magnatrol Valve is designed to your [illegible] specs and guaranteed free from defects in material and workmanship.

[illegible]

FREE CATALOG!

[illegible]

MAGNATROL VALVE corp.
HAWTHORNE 5, NEW JERSEY

IEN - 6549

Save paint . . . save time

SPRAY PAINT FROM THE ORIGINAL BUCKET

Let's cut out all the time-killing, paint-wasting mess of pouring paint from an bucket into a paint-tank. Let save a gallon a month of bucket-scrapings gathered paint time, paint free. It's simple with a Graco Paintmaster.

The air operated pump feeds paint straight from original bucket to spray head. It moves paint constantly as it spray — keeps on-going uniform — gives you better coverage — less paint waste.

You'll spend more time painting less time mixing and cleaning with Paintmaster. Write for details.

GRAY COMPANY, INC.
17 Graco Square
Minneapolis 13, Minn.

GRACO *Paintmaster*

IEN - 6550

RUBBER IS THE ANSWER

Acushnet
PROCESS COMPANY
NEW BEDFORD, MASS., U. S. A.

IEN-6551

When you need new or more pipe and tubing bent to special specifications, the time saves as well. With all tools, the time more goes for bender — and all is for bender. Any given bend, one-shot or in thirty-one, handsomely spot, or ask. For TAL Benders, bends all kind tubing without mandrels. Also R and S tubing in its diameters from ¼" to 1". Perfect finished bends guaranteed.

Write for information-filled data bulletins. Dept. 2.

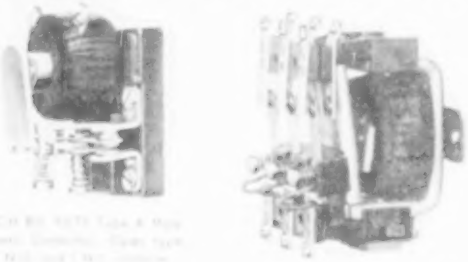
Exclusive Producers of Portable Pipe and Tube Bending Equipment

Tal Bender, Inc. Milwaukee 2, Wisconsin

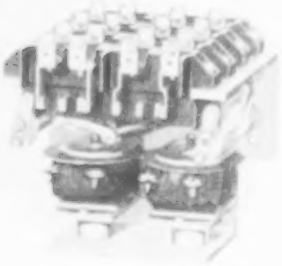
IEN-6552

CONTROL COMPONENTS

Built for Industrial Service



Industry's electrical engineers and machine designers find reliable answers to their control problems in these service-proven Cutler-Hammer Contactors



Industrial Control Equipment is Made in Canada by Canadian Cutler-Hammer, Ltd., Toronto.

CUTLER-HAMMER
MOTOR CONTROL
CH

IEN-6554

HAMMER . . Portable electric tool for masonry drilling, shipping, cutting

Source: NOBLE & STANTON INC.
1059 Broadway, Bedford, Ohio

IEN-6555

PROTECTING . . Industrial clothing of Vinyon N chemical resistant fabric

Source: CHEM-WEAR INC.
740 Broadway, 7th Floor, New York 3, N. Y.

Vinyon N

Fabric sample and illustrated data
40-page catalog
Vinyon-N Clothing

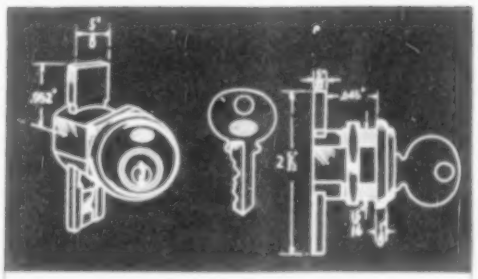
IEN-6556

CONNECTOR . . AC convenience outlet for standard plug, 15 amp., 110 volt ac.

Source: ALDEN PRODUCTS CO.
115-19 N. Main St., Brockton 64, Mass.

No. 102 W-1

IEN-6557



CORBIN ENGINEERS

welcome inquiries for any special or involved locking device that presents a problem. Corbin Industrial Catalog 29-I shows special cam locks in Pin Tumbler or Disc mechanism and will be sent upon request.

CORBIN CABINET LOCK DIVISION
The American Hardware Corporation
NEW BRITAIN, CONNECTICUT

IEN-6558

Does this question or some like it come painfully to the overall Drying or Curing problem requiring speed in consumption, or both.

You are assured of excellent drying from which no part of the area may make of any material is heated uniformly. To eliminate drying time is of the whole problem.

Consumption and space are reduced to the minimum. Speed is a necessity can result.

Get requirements and send samples from your mail. Ty Allis-Chalmers Sales Office, or write direct.

ALLIS-CHALMERS, 90PA 50, 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS A-C

IEN-6559

CONE DRIVE GEARS *and* SPEED REDUCERS

cost less per horsepower

due to:

1. Standardized gearing — double overlapping for greater load capacity.
2. Standard housings — more compact, lower in weight.
3. Standard cut-cooling mechanism — for even lower cost per horsepower.

Ask for prices and specifications of the operation by engineering.

CONE-DRIVE GEARS
DIVISION OF MICHIGAN TOOL CO.
7171 E. McNichols Rd. • Detroit 12, U.S.A.

IEN-6560

SYNTHANE — The Light-Weight Material

MAY GIVE YOU NEW IDEAS

Synthane plastic laminates are about half the weight of aluminum — and that is only one of many advantages they may have for you. Synthane is strong, hard, dense, resistant to corrosion, abrasion, impact fatigue and wear. It is easily machined on standard production equipment and has excellent electrical properties such as high dielectric strength and low dielectric constant. If you have a materials problem, the answer may be Synthane. For more information clip and mail the handy coupon today.

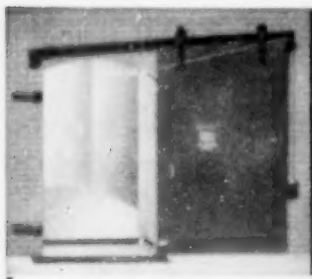
TECHNICAL PLASTICS
SHEETS • RODS • TUBES
FABRICATED PARTS

SYNTHANE

MOLDED LAMINATED
MOLDED MACERATED

SYNTHANE CORPORATION
South River Road, Oaks, Pa.
Please send me a piece of the complete Synthane catalog.
Name
Firm
Address
City Zone State

▼ BREVITY—Identify by IEN - 6561 if you write the maker ▼



INCREASE FIRE PROTECTION—CUT INSURANCE COSTS

COBURN FIRE DOOR HARDWARE

Metal-clad or Kalamein doors, outfitted with Coburn Fire Door Hardware, reduce fire hazards, and lower insurance rates.

Coburn Fire Door Hardware is made to specifications of The National Board of Fire Underwriters, and, where necessary, bears the U. L. Label. Special sets available for single and double swing to level side doors; single and double swing doors; vertically operated doors. All equipped with automatic self-closing devices. Write for catalog #210 showing full line of hardware, charts showing required hardware, wall space and other information.

Engineering help available without obligation.

COBURN PRODUCTS DEPARTMENT
WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORP.
Executive Office • 500 Fifth Avenue, New York 18, N.Y.
Sales Engineering • 56 Sterling Street, Clinton, Mass.

▼ BREVITY—Identify by IEN - 6562 if you write the maker ▼

THE FIRST NEW IDEA IN DRILL JIG BUSHINGS...

SINCE HECTOR WAS A PUP!

MEYCO
Carbide Inserted Bushings
SAVE money 7 ways

For information and prices write for Meyco Bushing Catalog No. 15

W. F. MEYERS CO., INC., BEDFORD, INDIANA

▼ BREVITY—Identify by IEN - 6563 if you write the maker ▼

IS DEEP DRAWING HOT OR COLD?

The Hackney Deep Drawing Process eliminates of hot or cold impingement from flat, circular sheets or plates. Cold drawing is then employed where it is necessary to obtain desired diameter and wall thickness. Required heat treatment is then added to provide needed physical characteristics in finished product.

It is this process which gives users of Hackney Shells many exclusive advantages: decreased overall weight, greater strength, faster production, elimination of expensive machining, superior finish, greater durability, improved appearance, lower costs.

If you're interested in seeing the Hackney Deep Drawing advantages for your product, write us today for full details.

PRESSED STEEL TANK COMPANY
Manufacturers of Hackney Products
MAIN OFFICE AND PLANT: 840 South 66th Street, Milwaukee 14
NEW YORK • CLEVELAND • DALLAS • SAN FRANCISCO • SEATTLE • ATLANTA • CHICAGO • LOS ANGELES

▼ BREVITY—Identify by IEN - 6564 if you write the maker ▼

PRINTING . . Pneumatic operator prints selected matter with typewriter

Source: AMERICAN AUTOMATIC TYPEWRITER CO.
612 N. Carpenter St., Chicago 22, Ill.

Model 5000 is a pneumatic assembly of the company's Auto-Typer equipment. In a few minutes, gentle pressure has proved to set up a desired sequence of paragraphs or statements, and then the machine is started to write that sequence at high speed in an entirely beautiful typewriter. The action also is with the perforated record strip which, together have capacity for about 500 lines of text typed into about a hundred paragraphs.

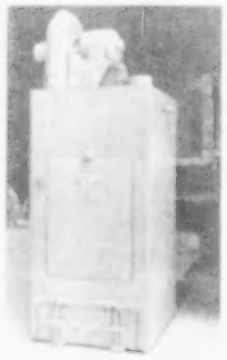
Individual paragraphs are selected in any desired sequence by pressing the buttons of the two banks on the face of the machine. The machine will repeat as many times as the Typewriter at speeds to 450 words per minute. The text can be performed by the user to specification by the company. A fast setting on the machine permits selection of [illegible] speed, so the five selected paragraphs are to achieve [illegible] the [illegible] drawings.

Folder, 6 pages, "How Would It Be Let to Handle" [illegible] machine and relative box a [illegible] to questions on a typical [illegible]

▼ BREVITY—Identify by IEN - 6565 if you write the maker ▼

DUST COLLECTING . . Tube type unit in four sizes rating 215 to 1,135 cfm.

Source: G. A. KLEISSLER CO.
124 Gotham St., Newark 5, N. J.



Dust-laden air is drawn in [illegible] the housing of the low [illegible] unit. The air enters a [illegible] chamber extending [illegible] the [illegible] of the unit where the heavy dust settles out to drop to the bottom of the housing and out the light dust and air enter the filter [illegible]. The motor is a half-bearing [illegible] unit. The blower is a Buffalo Forge Type B or Type V. Filter cloth area is 18 to 100 square feet.

Feature in the construction is the ball-bearing sand-operated vibrator equipment, supposed to shake dust from the filter tubes at intervals. Its design follows closely that of the company's larger dust-collecting equipment. Four sizes measure approximately 28 by 25 ft. to 34 by 37 inches. The smallest unit will take one 8-in. duct connection. The largest will take four of these connections.

All Makers of Those And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 38

▼ BREVITY—Identify by IEN - 6566 if you write the maker ▼

LIFTING SPEED OF 35 FEET PER MINUTE WITH YALE LOAD KING WIRE ROPE ELECTRIC HOIST... ¼ AND ½ TON MODELS

- 1 ton model has lifting speeds of 12 F.P.M. and 16 F.P.M.
- Push-button control leaves one hand free to guide the load.
- Wire rope has necessary flexibility for nominal side lifts.
- Grooved drum prevents wire rope from piling up.
- Lug type is standard. Top swivel hook or plain trolley easily attached.

Write for bulletin

YALE THE YALE & TOWNE MANUFACTURING CO.
Roosevelt Boulevard • Philadelphia 15, Pa.
HAND LIFT AND POWER TRUCKS • HAND AND ELECTRIC HOISTS • INDUSTRIAL DIAL SCALES

▼ BREVITY—Identify by IEN - 6567 if you write the maker ▼

SAVE *time, space and costs with* **AT&M** *centrifugals*

Does separation, [illegible] sorting, [illegible] sorting, [illegible] or [illegible] enter into your processing? If so, you'll find that an AT&M Centrifugal, large or small, will do it faster and better at lower unit costs. Made of all non-corrodible metals, AT&M Centrifugals are available with [illegible] bowls, [illegible] discharge, [illegible] and many other AT&M special features designed to meet specific problems. Why not send us a sample of your material for experimental analysis and recommendations — without cost or obligation? Address: Tech. and Marketing Department, 1417 Hyde Park Ave., Boston 36, Mass.

A.T. and M. CENTRIFUGING

▼ BREVITY—Identify by IEN - 6568 if you write the maker ▼

Looking for a good pump?

. . . *Here's a pump that never needs priming—*

JABSCO

the pump with the RUBBER *(oil resistant)* **impeller!**

Instantly self-priming at all times—at all speeds. Jabsco pumps are simple, rugged, and efficient. The pump's only moving part, a flexible, synthetic rubber impeller, creates a positive and powerful suction for instant self-priming. Jabsco's patented pumping action is so simple, so sure, it can't go wrong. Mounted at any angle—completely reversible—compact—self-lubricated—easy to install. Jabsco pumps are excellent in a variety of farm, food, chemical, marine, and industrial uses. Available in 6 sizes from ¼" to 1½"—in bronze and several models in stainless steel. For new pumping efficiency—for carefree performance—specify Jabsco pumps—the pump that never needs priming. For more information, for complete data sheets, write us.

JABSCO PUMP COMPANY
2031 N. Lincoln Street Burbank, California

▼ BREVITY—Identify by IEN - 6569 if you write the maker ▼

FILL-IN NAME-PLATES QUICKLY with—

ACROMARK

IEN-6570

MORE WORK between grinds with T-J CUTTERS

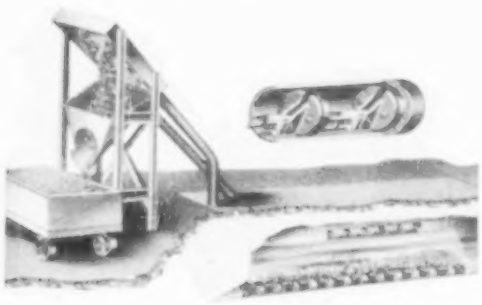
Less breakage... Lower Cost!

Your die cutter go down . . . and you can run the tool . . . using T-J Die Sinking Milling Cutters! They whittled dozens more jobs per grind, accuracy, speed and efficiency from your machine. T-J cutters made from a standard, extremely high grade tool . . . properly machined . . . scientifically heat-treated and accurately ground. They're extra rugged . . . hold a sharp edge longer . . . last longer! Wide range of T-J standard styles and sizes. Send for new catalog. Write The Tomkins-Johnson Co., Jackson, Mich.

FOR TOUGH JOBS SPECIFY T-J

TOMKINS-JOHNSON
DIE SINKING MILLING CUTTERS

IEN-6571



Houdaille CONVEYOR WILL WORK FOR YOU

Originally designed to handle sludge and waste matter in the metal working industry, the Houdaille Conveyor is being used to handle a wide range of applications in the materials handling field.

This automatic loading and continuous materials transport is adaptable to transporting any solid or fibrous material which will settle to the bottom of a tank or hopper.

Here are a few of the suggested uses for the Houdaille Conveyor:

METAL WORKING INDUSTRY
Cast Iron Borings and Chips
Aluminum Borings and Chips
Abrasive Sludge
Some washing from operations: metal cleaning, steel rolling, brass rolling, copper rolling, aluminum rolling, wire drawing

MATERIAL FROM DUST COLLECTORS

PLASTIC POWDERS

BREWERY PRODUCTS
Grain, spent or new

FOOD PROCESSING

PACKING PLANTS
Dressings
Other By-Products

SOAP MANUFACTURING
Powders, Chips, etc.

MANY OTHERS

If you have a material handling problem, write to 832 Wabash Avenue, Hershey, Illinois, Dept. 10

HONAN-CRANE CORPORATION
a subsidiary of
HOUDAILLE-HERSHEY CORP.

The Houdaille CONVEYOR

IEN-6573

SIGNALING . . Bulletin board assembles three panels, hardwood frame

Source: A. C. DAVENPORT & SON
109 N. DesPlaines St., Chicago 6, Ill.

Cork-faced panels for standard assembly of bulletin board, panels left 3, center panel for message in frame. The Davenport are assembled in a hardwood frame, [illegible] raw board. These hinged doors cover the panels. The [illegible] adjustable panel, can be moved from center position to either side. This panel takes white panels upon [illegible] board. Overall dimensions are 72 52. [illegible] Lift up on [illegible] $78 to deliver a set of [illegible] assembled.

IEN-6574

SHEARING . . Portable electric tool, to 20 fpm. in 14 gage hot rolled steel

Source: STANLEY ELECTRIC TOOLS DIV.
478-82 Myrtle St., New Britain, Conn.

No. 314A [illegible] Drive [illegible] Weight [illegible] Accessories [illegible] Price [illegible]

IEN-6575

HEATING . . Radiant gas burners the subject of bulletin on how they work

[illegible]

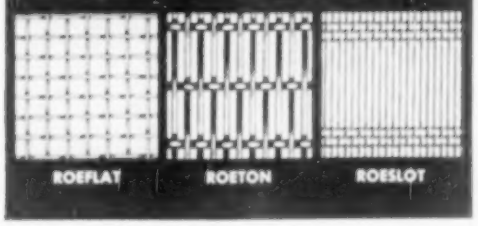
List of up drawings [illegible] Price [illegible]

All Makes of Tools And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 30

IEN-6576

FOR THE RIGHT CONSTRUCTION AND WIRE...

Today it's Roebling!



YOU'LL HELP SOLVE any screening problem with the right Roebling Wire Screen. (1) Choose Roeflat for maximum screening surface and accurate sizing. (2) Roeton for increased screening capacity. (3) Roeslot for rugged screening (specify) But for greater efficiency and economy, each of these constructions is available in Monel (high carbon steel), Roebling (oil tempered steel) and in Stainless Steel!

Write today for Aggregate Screen Catalog W-905 and full information for improving your screening operations.

WOVEN WIRE FABRICS DIVISION
JOHN A. ROEBLING'S SONS COMPANY
ROEBLING, NEW JERSEY

A CENTURY OF CONFIDENCE

IEN-6577

ASK YOUR **VICTOR** DISTRIBUTOR ABOUT

VICTOR molyflex 1018-006

THE NEW *molyflex* High Speed HAND HACK SAW BLADES

Your Victor distributor will tell you that this new "Molyflex" — when pared against eight leading competitive blades in cutting treated SAE 52100 ball bearing steel — averaged 11.8% more metal cut than all the leading brands tested. He will tell you that this new "Molyflex" — an addition to the Victor line — has greater uniformity, is absolutely shatterproof and unbreakable when used in a frame.

VICTOR STEELRITE METAL MARKING CRAYONS

Ask your Victor distributor about the new Victor Steelrite Metal Marking Crayons. Available in a variety of sizes, these crayons are made of genuine soapstone. Special extrusion process creates uniform strength and composition. Markings can be made on hot, cold, damp or grimy metal and will stand pickling, yet do not affect enamel application.

VICTOR
SAW WORKS, INC., Middletown, N.Y., U.S.A.
Makers of Hand and Power Hack Saw Blades, Frames and Band Saw Blades.

IEN-6578

NEW! REEVES VARI-SPEED Jr.

ANY SPEED YOU NEED without stopping your machines!

• Now you can equip your light horsepower machines with variable speed control at small cost. Operating on the time-tested principle of the famous Reeves Transmission, the Reeves Vari-speed Jr. is simple in design, trouble proof in operation and is easy to install. Gives any speed within the range of 3 to 1 to 4 to 1 simply by turning a handwheel, and without stopping the machine. Ideal for saws, lathes, drill presses, grinders, blowers, ovens, etc. Mounts on shaft of any standard motor from ½ to 1½ hp. Uses standard V belt and driven pulley. Sliding motor base furnished, if desired, at low extra charge, or you can rig up your own pivoting base using our instructions. Illustrated literature and simple chart enable you to select and install correct unit yourself. Write today for Bulletin DVC-6-1012.

REEVES PULLEY COMPANY • COLUMBUS, INDIANA

REEVES *Variable Speed Control*

IEN-6579

Travels at Truck Speed Easily Lifts 25 Tons

Fast, easy to maneuver in crowded yards, Koehring 304 Truck Crane gets around at truck speed.

Extra lifting capacity — up to 12.9 tons over side without outriggers; 25 tons with them, at 10' radius (85% rating). Convertible to Shovel, Pullshovel, Dragline.

KOEHRING 304 TRUCK CRANE
Koehring Company, Milwaukee 10, Wis.

IEN-6580

SMALL PARTS FEEDERS

Speed Up Processing

[illegible] of various sized and shaped small parts to its automatic machinery, inspection belts, counting devices—feeding them out one at a time in the desired, oriented position.

Controlled vibration does the job at 1600 per minute.

Send samples of your trouble-some parts for recommendation and quotation.

SYNTRON CO.
410 Lexington Ave. Homer City, Pa.

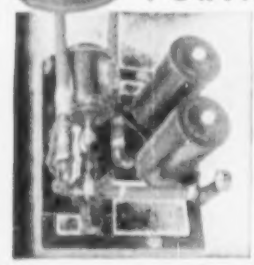
IEN-6581

INDUSTRIAL FILTERS

for Hydraulic and Lubricating Oils, Paint and Lacquer

General Full-Flow filters have an exceptionally high rate of flow. Removes foreign particles down to 5 microns. Also valuable in removing moisture. Wool cartridge is cleanable.

PORTABLE MODEL



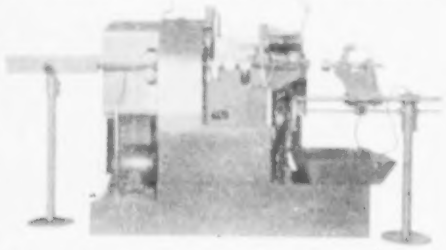
Includes pump for forcing paints, lacquers, or other liquids through the filters. Can be installed anywhere. Uses same Full-Flow filters. When installed on paint or lacquer tanks, the result is a much smoother, more beautiful finish.

Write — FOR LITERATURE and data on these heavy duty industrial units

GENERAL FILTERS, Inc.
13696 WESTWOOD • DETROIT 23, MICH.

IEN-6582

MODERN CUTTING-OFF MACHINE



Cuts off stock, pieces that require automatic machinery, straight and exact. FAST cutting and shearing of tubing, rod, shafting. Check the following figures:

1/2" Tubing	1 1/2" Cold Rolled	1" Tubing
[illegible]	[illegible]	[illegible]

4" THREADED STUDS

MODERN MACHINE TOOL CO.
JACKSON MICHIGAN

IEN-6583

PUMP . . Deep well turbine design glass lined bowls and bronze impellers

Source: A. O. SMITH CORP.
3533-35 N. 27th St. Milwaukee 1, Wis.

Watermaster [illegible]

Bronze impellers [illegible]

IEN-6584

PRESS . . Hydraulic, rates 30 ton, for corners on steel panels to 16 gage

Source: VULCAN TOOL CO.
728-32 Lorain Ave., Dayton 10, Ohio

Vulcan Draw [illegible]

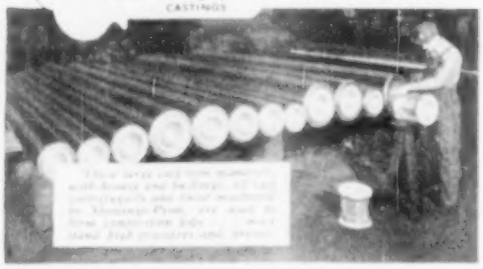
Control [illegible]

The tooling [illegible]

All Makers of Tools, And All Other Products, Are Listed In THOMAS' REGISTER — Description — Ratings — See Page 20

IEN-6585

SHENANGO PENN *Centrifugal* CASTINGS ... *KEY TO SAVINGS*



For high pressures, high stresses...

If you need rolls or any cylindrical or annular parts requiring special strength and toughness, wear resistance or freedom from gassing and flaws, check with Shenango-Penn. These very qualities are achieved in the catalog-listed Shenango-Penn centrifugal castings process. You need [illegible]

SHENANGO-PENN MOLD COMPANY
780 W. Third Street Dover, Ohio
Sales Offices: Pittsburgh, Pa.

SHENANGO PENN

HIGH NICKEL BRONZES • MANGANESE BRONZES • ALUMINUM BRONZES
MONEL METAL • "K-MONEL" • "HYCAST" METAL

IEN-6586

All plant managers should know these facts about pressure-treated lumber

FIRST [illegible]

SECOND [illegible]

THIRD [illegible]

FOURTH [illegible]

WOLMANIZED PRESSURE TREATED LUMBER

AMERICAN LUMBER & TREATING COMPANY

IEN-6587

"COMMERCIAL"

Purchasing agents and designers can avoid costly tools and dies by getting a Commercial "Shape Book".

This Booklet shows a number of circular shapes that can be economically used in designs in various articles, and will show a reduction in costs, make easier assembly but increase the mechanical advantages.

Write for the Shape Book — no tool or die charges for these standard shapes.

THE COMMERCIAL SHEARING & STAMPING CO.
P. O. BOX 719 YOUNGSTOWN 1, OHIO

IEN-6588

HY-PRO licked the problem and increased production *10-fold!*

PARTS PROBLEM: [illegible]

HY-PRO SOLUTION: [illegible]

Rx [illegible]

Order from your Distributor

HY-PRO TAPS — **HY-PRO TOOL CO.**
NEW BEDFORD, MASSACHUSETTS
A SUBSIDIARY OF CONTINENTAL SCREW COMPANY

IEN-6589

Oakite's New FREE Booklet

"Some good things to know about Metal Cleaning"

- Tank cleaning methods
- Machine cleaning methods
- Electrocleaning steel
- Electrocleaning nonferrous metals
- Pickling, descaling, bright dipping
- Pre-paint treatment in machines, in tanks, and by hand
- Paint stripping
- Steam-detergent cleaning
- Barrel cleaning
- Burnishing
- Better cleaning in hard water areas
- Treating water in paint spray booths
- Rust prevention
- Machining and grinding

FREE For this 44-page illustrated booklet, write Oakite Products, Inc., 19A Thames St., New York 6, N. Y.

OAKITE SPECIALIZED INDUSTRIAL CLEANING MATERIALS · METHODS · SERVICE

IEN-6590

MICRO PRECISION SWITCHES for Production Short Cuts

1 MICRO Precision Switches Properly Position Sheet Stock in Shearing Press

2 MICRO Precision Switch Checks Parts for Double Thickness

MICRO SWITCH Distributors with complete stocks are located in ninety-nine cities to supply you with just the right switch to make your plant operations more automatic. Look for them under "Switches, Electric" in your classified phone book.

MICRO MS SWITCH
FREEPORT, ILLINOIS, U.S.A.

MICRO... first name in precision switches

*Copr. 1950, Minneapolis-Honeywell Regulator Co.

BRANCH OFFICES: Chicago · New York · Boston · Cleveland · Chattanooga · Los Angeles
SALES REPRESENTATIVES: Portland · St. Louis · Dallas · Toronto

IEN-6592

VALVE . . Plug type design
1/4 to 2 in., to 800 lb. at 750 deg. F.

Source: HENRY VOGT MACHINE CO.
1020 W. Ormsby St., Louisville 10, Ky.

Forged steel . . .

Size . . .

IEN-6593

MARKING . . Roll type tool
for work in lathe or screw machine

Source: NEW METHOD STEEL STAMPS INC.
141-45 Jos. Campau St., Detroit 7, Mich.

New roll tool . . .

At this point . . .

IEN-6594

COMPRESSED AIR . . Information on its use
in non-technical booklet on theory and application

"Compressed Air Power" . . .

IEN-6595

CONE WHEEL SMOOTHS OUT DIE MARKS 200% FASTER

In grinding die marks from the inside of pressure tanks, this manufacturer was using straight type 8500 R.P.M. grinders with 6" x 2" x ½" corded wheels. The wheels cut grooves into the tank on either side of the die marks, causing failures under tests.

It was called in the Rotor Application Engineer recommended where R.P.M. Rotor Air Grinders with 7½" x 1½" x ½" textured bond cone wheel, round nose. Result:

Quality increased 200% because the round nose cone wheel could be held on the die marks without cutting into the tank wall . . . and because of the lower cutting of the textured wheel and its higher speed.

Now the underwriter says, "OK," every time.

How about your portable tool problems? We'd like to tackle them!

AIR O'TOOL

THE ROTOR TOOL CO.
CLEVELAND, OHIO

IEN-6596

NORTHERN HI-LIFT
HEAVY DUTY HOISTS

FLOOR CONTROL TYPE

CAB CONTROL TYPE

SWIVEL TRUCK TYPE

ALSO STANDARD AND TRAMRAIL TWO TRUCK TYPES
ASK FOR BULLETIN H-110

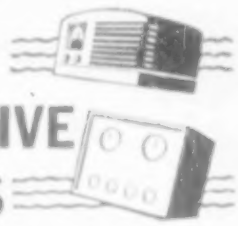
For safe, dependable handling of heavy loads in heavy-duty service, NORTHERN HI-LIFT HOISTS permit more diversified, general purpose use—wider adaptability to changing service demands.

NORTHERN ENGINEERING WORKS, 2455 Atwater St., Detroit 7, Mich.

NORTHERN CRANES AND HOISTS

IEN-6597

ELIMINATE WIRES
through use of DU PONT CONDUCTIVE COATINGS



Easily and rapidly applied by spray, brush, dip, stamp to metals and non-conductors, they give a conductive surface of low resistance. One 10-g sample covers about 1 sq. ft. Use them to painted circuits for radios, amplifiers, switchboards, meters, for connections and coatings. For more detailed information, send for Bulletin CP-1247. E. I. du Pont de Nemours & Co., Inc., Electrochemicals Dept., Wilmington 98, Delaware.

DU PONT ELECTROCHEMICALS

DU PONT

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

IEN-6598

Before YOU BUY ANY HYDRAULIC JACK

See HEIN-WERNER

the BEST hydraulic jacks for EVERY industrial use

Hein-Werner Hydraulic Jacks are built to give better, longer service of rugged industrial applications. They're made extra strong at points of greatest stress.

Feature the famous Heinie Piston, and are tested at 1½ times rated capacity. They're more economical, more efficient at hundreds of maintenance and production jobs in your plant.

Made in models of 1½, 3, 5, 8, 12, 20, 30, 50 and 100 tons capacity. See your industrial distributor or write us.

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORPORATION
WAUKESHA, WIS.

▼ BREEZE—Identify by IEN-6599 if you write the maker ▼

Around the World it's

HOOVER BALLS

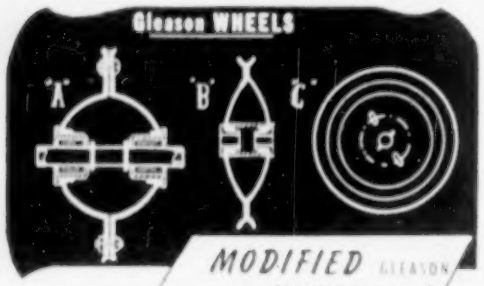
made of

CHROME STEEL - CARBON STEEL - STAINLESS STEEL BRASS - BRONZE AND MONEL METAL

"America's Foremost Ball Manufacturer"

HOOVER BALL AND BEARING CO.
Ann Arbor, Michigan

▼ BREEZE—Identify by IEN-6600 if you write the maker ▼



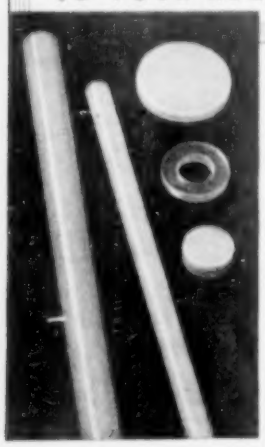
Special hubs to meet product requirements are easily produced by modifying standard Gleason wheel designs. "A" allows free rolling when locked tight on axle, provides a bolted assembly. "B" the answer to a reinforced center hub. "C" provides a connection to a drive mechanism. Best of all modified Gleason Wheels give mass production economies to all firms: a farm equipment manufacturer, a power mower builder and the maker of special juvenile vehicles. See Gleason for wheel economy for your products.

GLEASON CORPORATION 530 N. 9th St., MILWAUKEE 3, WIS.

GLEASON WHEELS FOR *Price Competitive* PRODUCTS

▼ BREEZE—Identify by IEN-6601 if you write the maker ▼

NYLON . . MOLDED TO YOUR REQUIREMENTS



VALVE SEAT DISCS
in FM-10001 (Rigid) Nylon

VALVE WASHERS
in FE-1044 (Semi-Rigid) Nylon

CONTRACT NYLON MOLDING
We have the set-up and the experience to give you the best in nylon parts molding in small or large quantities.

SEND FOR QUOTATIONS ON SPECIFIC REQUIREMENTS

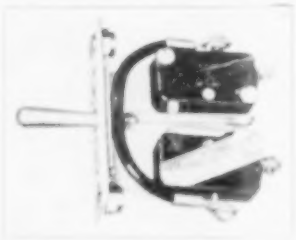
NYLON RODS
FOR IMMEDIATE DELIVERY
In ¼", ⅜" and ½" diameters and 8½" lengths in FM-10001 Nylon. Quantity prices on request.

S.S.WHITE PLASTICS DIVISION
THE S.S. WHITE DENTAL MFG. CO.
DEPT. 147 10 EAST 40th ST., NEW YORK 16, N. Y.
FLEXIBLE SHAFTS AND ACCESSORIES
MOLDED PLASTICS PRODUCTS · MOLDED RESISTORS

▼ BREEZE—Identify by IEN-6602 if you write the maker ▼

SWITCH . . Lever operated assembly of momentary contact sensitive units

Source: MICRO SWITCH CORP.
30 E. Spring St., Freeport, Ill.



Type 1AT1 is one assembly of two of the complete + Type 1A momentary contact single-throw switches. Each switch with a separate operating arm mounted on a common shaft. One arm and the other is normally closed when the lever is in a neutral center position. One closes to closed when the lever is moved in one direction. The other is thrown to open on moving the lever in the opposite direction. Assembly weight is about 2 ounces. Contact rating is 10 amp. at 115-125 v. ac. A similar assembly of two double-throw switches is covered in Type 1AT2.

▼ BREEZE—Identify by IEN-6603 if you write the maker ▼

CORROSION PROOFING . . Resin film coats tanks to plate, process, store

Source: NUKEM PRODUCTS CORP.
109-11 Colgate Ave., Buffalo 20, N. Y.

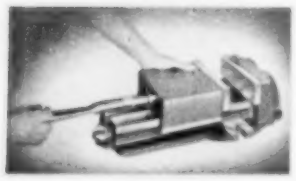
Company supplies the materials and applies them

Nukemizing treats surfaces with protective coating from spray-coating equipment and a source that serves to supply a corrosion proof coating over the surface. Forms of steel tanks to handle solutions for pickling, plating, processing and to store liquids that can attack unprotected steel. The tank is a composite of properly-cure resins and modifiers for good adhesion, hard, non-sensitive and favorable thermal characteristics.

▼ BREEZE—Identify by IEN-6604 if you write the maker ▼

VISE . . Quick acting hand unit opens to 11 in., applies on a machine

Source: AMES PRECISION MACHINE WORKS
129-33 Lexington St., Waltham 54, Mass.



Tilting block is the operating mechanism of this vise. Model S one-hand vise is revolved 90° a partial turn of the operating arm. Unit is fitted to release the movable jaw for a straight pull. The jaw is advanced by pushing to contact the work and then the block is tightened in place by another partial turn of the lever.

The jaws measure 8 by 2¾ inches. The vise is 23 in. in overall width to 5½ in. in height. It weighs 325 pounds. List price of the complete assembly is $395.

All Makers of Every Kind, All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 10

▼ BREEZE—Identify by IEN-6605 if you write the maker ▼

HERE IS A SIMPLE WAY

TO MEASURE VIBRATION

This portable, battery-operated, self-contained and simple-to-operate vibration meter is proving extremely useful in research, design, production testing and maintenance of all types of machinery. Vibrations as low as those occurring at two cycles per second may be measured.

The instrument is direct-reading over the following ranges:

DISPLACEMENT: 16 micro-inches to 30 inches, rms.

VELOCITY: 160 micro-inches per second to 300 inches per second, rms.

ACCELERATION: 0.160 inch per second-per-second to 3900 inches per second per second, rms.

TYPE 761-A VIBRATION METER $425

If you have any problem in which excessive vibration is bothering you, you'll find this vibration meter of great value. For complete information write for

The NOISE PRIMER

GENERAL RADIO CO.
Cambridge 39, Massachusetts
NEW YORK CHICAGO LOS ANGELES

▼ BREEZE—Identify by IEN-6606 if you write the maker ▼

Varglas SILICONE

Electrical Insulating Tubing and Sleeving for wide temperature ranges

Between 85° F below Zero and 500° F above Zero

Owes its amazing temperature range to a combination of Varglas and Silicone. Resists moisture and ultra-flame resistant and self-extinguishing —Strongest of all accepted insulating materials. Pioneered by Varflex.

TEST VARGLAS SILICONE IN YOUR PLANT

Write today for your free folder of working samples.

Varflex **CORPORATION**
306 N. Jay St.
Rome, N. Y.

▼ BREEZE—Identify by IEN-6607 if you write the maker ▼

NEW...

Extremely sensitive
PRESSURE & VACUUM
Switches

TYPE SB

The new Type SB pressure and vacuum switches are for use in applications in which close on-off differentials and absolutely consistent maintenance of cut-in and cut-out settings are essential in the control of pressure or vacuum. Available are two pressure models and two vacuum models. The Pressure Switches have adjustable ranges from 0-15 psi and adjustable on-off differential from 1" w.c./10" w.c. They may be furnished as calibrated, micrometer type or unscalibrated for screw driver adjustment.

Electrical ratings of 125/250 V AC between 1200 watts and pilot duty depending on differential. The Vacuum Switches offer adjustable ranges from 30" Hg vac with adjustable on-off differential from 1" w.c./12" w.c. Furnished as calibrated micrometer type or unscalibrated with screw driver adjustment. Electrical ratings of both models 1200 watts at 125/250 V AC.

UNITED ELECTRIC CONTROLS COMPANY
80 School Street
Watertown, Mass.

Special models available for requirements not included in the specifications above.

Write for new Bulletin #926 F giving complete details today.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▼ BREEZE—Identify by IEN-6608 if you write the maker ▼

This BIG 36-PAGE BOOK can save YOU money!

Tells you how
...to buy
...to use
...to profit
from chain saws

IT'S FREE!

Send for your copy now. Simply fill in your name and mail it today.

HENRY DISSTON & SONS, INC.
727 Tacony, Phila. 35, Pa., U.S.A.
In Canada
write 128 Fraser Ave.
Toronto 3, Ont.

Henry Disston & Sons, Inc. (Adv. Dept.)
727 Tacony, Philadelphia 35, Pa., U.S.A.

Gentlemen:
Please send me my FREE copy of "How To Cut Costs and Make Money with Chain Saws."

Name _____
Street _____
City _____ State _____

IEN-6609

Interlocking wires lace together to form a continuously flat and extremely flexible open mesh conveyor belting. Simple to install, it is positively driven, easily guided, readily cleaned and quickly repairable.

Available in stainless steel, it can be supplied in light or heavy gauges, and in widths from 2". Special sizes, designed to your specifications, can be supplied at no extra charge. Most belts can be delivered from stock.

For typical applications and illustrated uses, write:

WIRE BELT COMPANY OF AMERICA
750 Main Street, Cambridge 39, Mass.

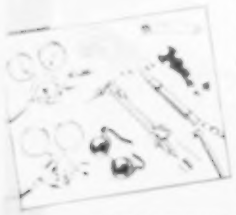
IEN-6610

Better Built HEAD & EYE PROTECTION • WELDING & CUTTING EQUIPMENT

DOCKSON GOGGLES are correctly designed to give the utmost in comfortable and specific protection. Goggles for any hazard. Built for Better Service. Series 60 Monelite Chippers' Goggle shown.

DOCKSON FACE SHIELDS are featherweight but engineered for utmost safety and durability. Adjustable without slipping or sticking. Series 1120 shown, and 15 other models. Built for Better Service.

DOCKSON WELDING HELMETS AND HANDSHIELDS are dependably tough, easy to wear and instantly adjustable. Leak-proof seams and Federal Specifications plates insure utmost safety. No. 1250 Turretype Helmet shown.



DOCKSON WELDING AND CUTTING EQUIPMENT includes combination outfits, welding and cutting torches, attachments, gauges and all accessories. No. 145 Hi-Speed Welding and Cutting Outfit shown.

THERE IS A DOCKSON DISTRIBUTOR NEAR YOU. NAME ON REQUEST. Send for new catalogs on the complete DOCKSON line.

Dockson CORPORATION
3839 WABASH • DETROIT 8, MICHIGAN

IEN-6612

TRUCK . . Engine driven fork lift rates 5 ton, magnetic transmission

Source: CLARK EQUIPMENT CO.
Battle Creek 69, Mich.

Lift/price 100

The truck

Folder

IEN-6613

VALVE . . Flanged tee assembly of two 30-in. butterfly valves

Source: R-S PRODUCTS CORP.
4526-32 Germantown Ave., Philadelphia 44, Pa.

New assembly of the company's 30-in. No. 100 rubber-seated butterfly valves in one unit and flanged outlet from a Dresser plug valve, as shown in the illustration. The operating connections are risk, [illegible] and both [illegible] can be turned from the handwheel or chain wheel. The valves can be disconnected for little or no [illegible] operation. The operating is for use in blocking upstream and in reversing flow action for in-line [illegible] service.

Rubber seating for such tight operating and [illegible] service can be specified. The seat is drop tight in the rubber compression under [illegible] pressure. If [illegible] tight to 40 lb. [illegible] temperature [illegible] to 150° F. The rubber seat is replaceable.

All Makes of Fluids And All Other Products Are Listed In THOMAS REGISTER — Descriptions — Ratings — See Page 36

IEN-6614

THIS CATALOG GIVES THE ANSWERS

DISTILLED WATER?

DEMINERALIZED WATER?

In hundreds of manufacturing processes, where [illegible] pure water is needed, Barnstead units provide the highest quality demineralized, chemically pure, sterile water from [illegible] to 1000 gallons per hour. Write now for different models to choose from. Barnstead can provide the exact unit to fit your particular needs. For Barnstead Laboratory and Industrial units are the proven standard of the scientific and industrial world.

FREE

Catalog 2113 gives both sides of the Pure Water Picture. Since Barnstead makes both stills and demineralizers, you'll find this catalog complete, [illegible] unbiased. Write Today!

When modern manufacturing processes require only high-cost demineralized water, Barnstead Demineralizers are the best producers. [illegible] per 1000 gallons with a minimum of supervision and maintenance. Many new installations are turning to Barnstead Demineralized Water for greater production, lower [illegible], and better quality control.

Barnstead STILL & STERILIZER CO.
First in Pure Water since 1878
50 Lanesville Terrace, Forest Hills, Boston 31, Mass.

IEN-6615

NEW SHOP CONVENIENCE KIT

. . . see how **ELGIN** *diamond* *cuts finishing costs!*

Two Elgin Kits contained approximately [illegible] the new diamond tool. The new Elgin Diamond SHOP CONVENIENCE KIT will save you [illegible] surfaces, [illegible] plastic, metals, protective [illegible] coatings, [illegible] the finishing [illegible] of your operations, preparation and more production [illegible]. Contact the product of Elgin Diamond [illegible] to produce a superior finish in less time on production, tool rooms and other hand finishing jobs.

WRITE TODAY FOR FREE DEMONSTRATION RIGHT IN YOUR OWN PLANT!

INDUSTRIAL PRODUCTS DIVISION
ELGIN NATIONAL WATCH COMPANY
ELGIN, ILLINOIS

IEN-6616

. . . and get fastest fastener-service from this modern, high-production plant

Save time and "wrong numbers" by changing your records now to the address of American's new main plant and home office.

For either Phillips or slotted, mark your order "American . . . and shoot it to Willimantic, Connecticut.

AMERICAN SCREW COMPANY
Plants at Willimantic, Conn. and Hartsdale, Pa.

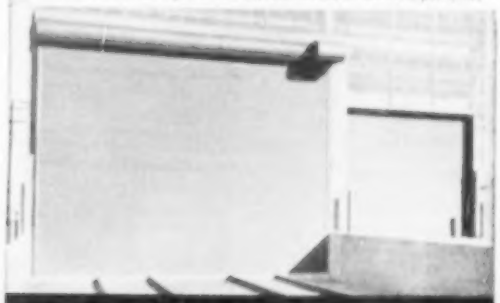
IEN-6617

Rolling Steel Doors

Manually • Mechanically • Power Operated

When you want greatest economy of space—both inside and outside of the opening, greatest protection, convenience, dependability in operation and number of years of trouble-free service, you will find these features in greatest measure in a good rolling steel door. When you buy Mahon Rolling Steel Doors, you are assured the latest developments in doors of this type . . . you get exclusive design and operating features which continue to gain favor with industrial, commercial and transportation concerns throughout the country. See Sweet's Files for detailed information, or write for Catalog No. G-49.

THE R. C. MAHON COMPANY
Detroit 11, Michigan • Representatives in All Principal Cities



MAHON

IEN - 6618

IEN - 6619

Hardened steel nozzles for long wear. Removes rust, paint, carbon. Prepares metal for soldering and welding. Holds 5 pounds silica sand, works efficiently with 80 to 125 pounds compressed air. Air Blow Gun, which is a detachable part of sand blast cleaner, may be purchased separately, for blowing dust, dirt, etc. Has ¼" hose stem connection. Write for catalog.

Air Spray Cleaners — Quick-connective Couplings

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

IEN - 6620

HERE'S
A GOOD WAY TO
CUT YOUR FIRE FIGHTING COSTS
ROCKWOOD
TRIPLE-ACTION SG-48 WATERFOG NOZZLES

Lightweight

1. High velocity WaterFOG
2. Straight stream
3. Low velocity WaterFOG from extension applicator

Rockwood WaterFOG Nozzles will out-perform any other fog nozzles operating on either high or low pressures for all around fire fighting purposes.

Extinguishes fires in flammable liquids and ordinary combustibles faster and with less water.

Designed for use in industrial plants, chemical plants, oil refineries, mercantile and public buildings and municipal fire departments, etc.

Write for bulletin C-501R

ROCKWOOD SPRINKLER CO.
60 HARLOW STREET WORCESTER 2, MASS.

IEN - 6621

VALVE . . Safety relief design permits fluid recovery on outlet side

Source: FARRIS ENGINEERING CORP.
550 Commercial Ave., Palisades Park, N. J.

IEN - 6622

PRESS . . Bench type pneumatic rates 2 ton impact on 80 pound air

Source: BIEBER & DRESBACK
614-18 Riverside Ave., Saugatuck, Conn.

IEN - 6623

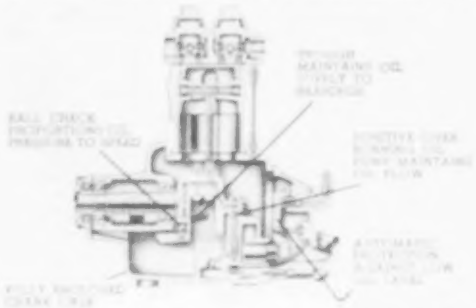
IRON . . Statement on ore reserves declares there is no shortage of iron ore

Estimated reserves

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Buyers' Guide — See Page 30

IEN - 6624

IEN - 6625



Points of Protection on the
Westinghouse Air Brake Company
"Y" COMPRESSOR

The picture gives the "inside story" of the engineered features of the "Y". High dependability, low maintenance. Ask for Bulletin IDC 9302-A.

Westinghouse Air Brake Co.
Industrial Division, Wilmerding, Pa.

DISTRIBUTORS THROUGHOUT THE UNITED STATES
CONSULT YOUR CLASSIFIED DIRECTORY

IEN - 6626

DOLLIES & TRUCKS

● A general purpose dolly with open frame and flush top. Light and easy to carry yet capable of handling heavy loads. Equipped with four swivel casters having 3" vulcanized or rubber tired wheels.

★ Ironbound material handling representatives are located in all important cities. These men can help you with all handling problems involving the use of standard Skids, Semi-Live Skids, Floor Trucks, Roll Handling Trucks, Dollies or specially designed adaptations to meet particular requirements.

IRONBOUND
FLO TRUK

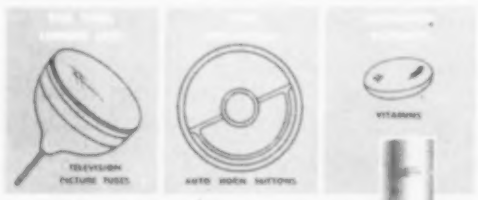
● Fashioned on an all purpose general warehouse unit. Rugedly constructed of selected hardwood deck. Equipped with rubber tired or vulcanized wheels.

Ask for Catalog GF-7

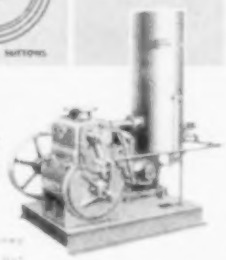
IRONBOUND
BOX & LUMBER COMPANY
16 HOFFMAN PLACE • HILLSIDE N. J.

SKIDS • SEMI LIVE SKIDS • DOLLIES • FLOOR TRUCKS

IEN - 6627



The Touch of Gold



Vacuum processing with Kinney Pumps is "the touch of gold" in our times. Under the touch of low absolute pressures, atoms of product fairly come to life with new qualities — product improvements that make sales curves show new vitality.

In the laboratory, Kinney Pumps have played a big part in the research and development of new vacuum products and processes. On the production line, too, you'll find these iron pumps "slugging" it out . . . day after day, year after year. Kinney Pumps give low absolute pressures down to 0.5 micron . . . quickly, economically, dependably. Send for Bulletin V-41.

Kinney Manufacturing Company, 3564 Washington St., Boston 30, Mass. Representatives in New York, Chicago, Cleveland, Houston, New Orleans, Philadelphia, Los Angeles, San Francisco, Seattle.

KINNEY HIGH VACUUM PUMPS

IEN-6628

• This illustrated booklet shows how Invincible Units are saving money by efficiently salvaging unused flux or submerged arc welding jobs. Invincible operates more rapidly and for better than any manual method. Also by eliminating fine dust ("fines") from the salvaged flux that reduce welding results. Invincible Units are compact, easily installed and dikes automated continuous operation.

Send for your copy of this booklet now!

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

IEN-6629

Here's the saw you'll see cutting costs!

New WALKER-TURNER 12" Tilting Arbor Saw

SOLD ONLY THROUGH AUTHORIZED DEALERS

KEARNEY & TRECKER
MILWAUKEE
WALKER-TURNER DIVISION
PLAINFIELD, NEW JERSEY

IEN-6631

VENTILATING . . Aluminum fan blades 10 to 24 in., for motor shaft mounting

Source: THOMAS BECKETT & CO.
P. O. Box 7354, Dallas 9, Texas

IEN-6632

CLEANING . . Liquid material cuts grease from metals and plastics

Source: BARCO CHEMICAL PRODUCTS CO.
703 S. LaSalle St., Chicago 5, Ill.

Packaged in 1 to 55 gal. containers

IEN-6633

TESTING . . Flow checking unit for heavy bodied paints, semi-pastes

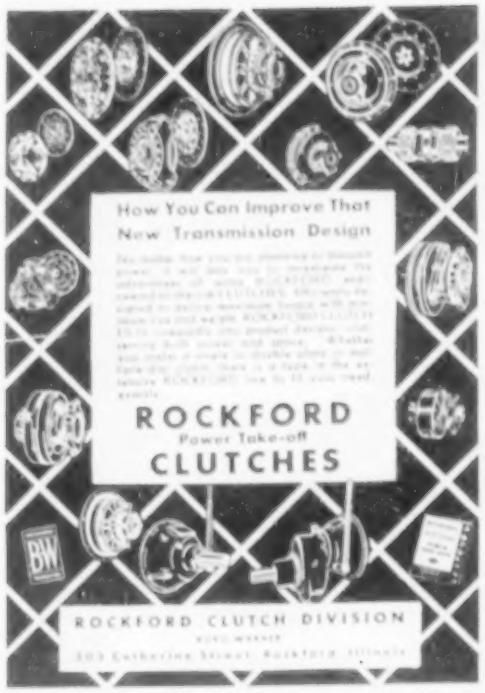
Source: HENRY A. GARDNER LABORATORY INC.
4720 Elm St., Bethesda 14, Md.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 38

IEN-6634

SPROUT-WALDRON & COMPANY
Manufacturing Engineers
5 WALDRON STREET MUNCY, PA.

IEN-6635



IEN-6636

A. W. CASH VALVE MANUFACTURING CORP.
6612 East Wabash Avenue, Decatur, Illinois, U. S. A.

IEN-6637

Whiting Type "CH" Hydro-Clone is designed to handle heavy loadings of dust in locations with extremely low headroom and limited space. It absorbs fumes and gases.

Suppresses Dust with Water

Hydro-Clone Equipment suppresses dust with water, reducing it to a tumbler, easily disposable sludge removed automatically with a conveyor. There are no moving parts in the air stream . . no dust bags or screens. Write for Bulletin FX-105 for full information on Type "CH" Hydro-Clone.

WHITING CORPORATION
15629 Lathrop Ave.
Harvey, Illinois

FREE

IEN-6638

QUICK ACTION
ON ANY ORDER

Ex-Cell-O Carries 300,000 Drill Jig Bushings in Stock

In addition to accuracy and long life, you get fast delivery on any order of any size when you specify Ex-Cell-O Drill Jig Bushings. That is because Ex-Cell-O stocks more than 300,000 bushings—one of the largest and most varied supplies in the world. For list of standard styles and sizes quickly available, write today for your free copy of Ex-Cell-O Bulletin 35371

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

XLO

IEN-6639

You don't pay for an... Abart SPEED REDUCER

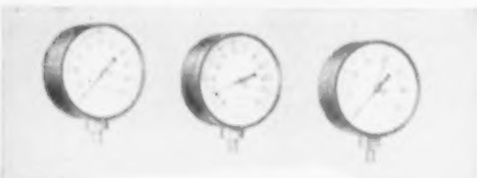
IT PAYS YOU TO USE IT!

Good engineering ... good design ... highest quality materials ... make Abart Speed Reducers a paying investment. It's an investment that pays off in quiet, trouble-free operation, power-saving economies, and extra long, dependable service. We make more than 35 types of Reducers in spur, worm, or combination: 1/50 to 417 HP—ratios up to 10,000 to 1. Send today for our informative book on Abart Reducers, containing engineering data and drawings, and a complete list of Reducers available. It will help you solve your speed reducer problems!

Abart GEAR & MACHINE CO.

4821 W. 16th Street Chicago 50, Ill.

IEN-6640



1001 GAUGES to choose from

The combinations of styles, types, mountings, ranges and functions of Marsh Gauges are almost endless. But they all have one trait in common: Each is best for the service for which it is recommended. Write today for the new Marsh Catalog covering the broad Marsh line. Let us prove that Marsh is the gauge for your problem, whether you need a few or thousands.

Marsh Instrument Co.
Sales affiliate of
Jas. P. Marsh Corp.
Dept. A, Skokie, Ill.

MARSH

IEN-6641

VALVE .. Forged steel globe and angle, 1/4 to 2 in., to 1,500 lb.

Source: EDWARD VALVES INC.
1235 W. 145th St., East Chicago, Ind.

Series 111 is a new line of ... globe and angle ... valves. It has ...

IEN-6642

GRINDING .. Portable pneumatic tool takes rotary files, abrasive points

Source: MASTER PNEUMATIC TOOL CO.
49 Master St., Orwell, Ohio

Model M-612 ...

Weights ...

IEN-6643

PRESS TOOLS .. Standardized punch for 1/16 to 7/8 in. round holes

Source: ALLIED PRODUCTS CORP.
12675-79 Burt Road, Detroit 23, Mich.

High speed steel ...

Heavy duty design ...

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 58

IEN-6644

test this three-way

Vibration Protection

FREE sample kit demonstrates locking efficiency of...

SHAKEPROOF LOCK WASHERS

Because exclusive tapered twisted teeth provide spring tension, that action and curved tooth bite for holding, bracing and anchoring, Shakeproof Lock Washers will protect the fastenings in your product from the hazards of vibration encountered in shipment, in handling and in use. Prove it to yourself...
Write for free test kit today!

SHAKEPROOF inc.
fastening Headquarters
DIVISION OF ILLINOIS TOOL WORKS
2501 North Keeler Avenue, Chicago 39, Illinois

IEN-6645

WIRE MESH

Maybe it all does look pretty much the same at first glance. But when a firm has been making wire mesh for ... years ... a little more know-how in engineering and weaving, a little more quality in the product, a little more service and satisfaction for the user.

JELLIFF WIRE MESH is woven in all ... metals.
JELLIFF WIRE MESH is woven in all commercial weaves.
JELLIFF WIRE MESH is woven in widths up to ... inches.
JELLIFF WIRE MESH is ... to the specifications.

* * * *

JELLIFF WIRE MESH is a quality product and has been for ... years. You can depend on it.

Write today for full details about JELLIFF WIRE MESH, JELLIFF WIRE MESH PRODUCTS, and JELLIFF'S CONSULTATION SERVICE on wire-mesh engineering. Address Department 12.

THE C. O. **JELLIFF** MFG. CORP.
SOUTHPORT CONNECTICUT

IEN-6646

Consider

RESILIENCE

for these 2 kinds of moldings

1 LARGE PIECES **2** Pieces molded around METAL INSERTS

The material used in moldings that have large surface areas and those with metal inserts molded in should have more than average resilience. In the one case, this extra "give" can be even more valuable than added impact strength when parts must withstand hard use and stresses. In the other, the resilience insures a permanent strong bond between plastic and metal.

The complete Durez family of phenolics now includes a material developed to meet this requirement exactly.

DUREZ 14658

— the nitrile-rubber-bearing phenolic

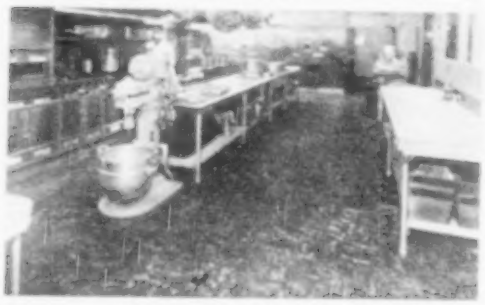
In developing this new material we have been able to retain the many other useful properties of phenolics. Durez 14658 has excellent general characteristics, including heat and water resistance, electrical properties and moldability. For designers and molders this molding compound holds new opportunities.

SEND FOR DATA— ...

Phenolic Plastics that fit the job

PHENOLIC RESINS — MOLDING COMPOUNDS — INDUSTRIAL RESINS — PROTECTIVE COATING RESINS

IEN-6648



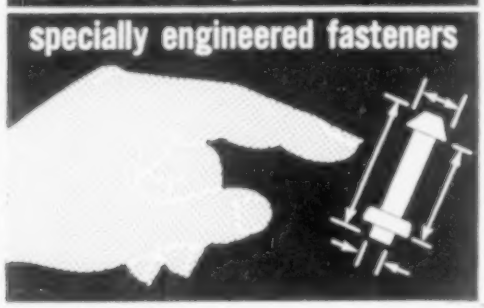
This kitchen floor may
SOLVE YOUR FLOORING PROBLEM

OFFICE AREAS BRIGHTEN UP WITH FLOORS OF TILE-TEX . . . THE QUALITY ASPHALT TILE

TILE-TEX FLOORING PRODUCTS

IEN-6649

SPECIFY Hassall
specially engineered fasteners



Hassall cold-headed fasteners can improve your products and save you money, even on short runs. Send us your specifications for your nails, rivets and screws... in diameters from 1/32" to 3/8"... lengths to 7"... in any workable metal... in practically any finish. Your inquiry will be handled promptly. Ask for free catalog.

JOHN HASSALL INC.
132 Clay St., Brooklyn 22, New York

Hassall

IEN-6650

PITTSBURGH
a air p pressure t tested **COILS**

Quick for your particular needs. Send blue print or rough sketch for Pittsburgh quotation. Also air-pressure tested Welded Heat Ex. Welded Ammonia Receivers, Accumulators, Pipe Coils, Bends, Boiler Tubes. "Let us quote!"

Pittsburgh Pipe Coil & Bending Co.
41 BRIDGE STREET ETNA, PITTSBURGH 22, PA.

IEN-6651

GAGE . . Float type design to actuate indicator or controller

Source: FISCHER & PORTER CO.
751 County Line Road, Hatboro, Pa.

IEN-6652

TRANSFORMER . . Variable voltage for manual line voltage corrections

Source: SUPERIOR ELECTRIC CO.
92 Hannon Ave., Bristol, Conn.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 38

IEN-6653

HERE'S YOUR **Complete** STEAM PLANT

Burns Oil or Gas or Both!

Superior STEAM GENERATOR

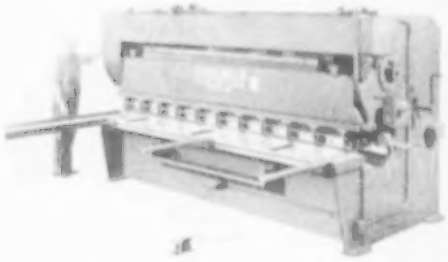
IEN-6654

DETECTO SCALES

DETECTO-GRAM HIGH ACCURACY SCALE

DETECTO · SCALES · INC.
MAKERS OF THE FAMOUS DETECTO SCALES
541 PARK AVENUE • BROOKLYN 5, N. Y.
REPAIR ENGINEERS ON ALL PRINCIPAL SCALES

IEN-6655



PIVOTED-BLADE SHEAR
A Revolutionary Design!

UPPER KNIFE TRAVELS IN CIRCULAR PATH

THE CLEVELAND CRANE & ENGINEERING CO.

STEELWELD SHEARS

IEN-6656

$17.00 Handling Job Cut to $1.00 with BAKER TRUCK

Some Truck helps Johnson Steel & Wire Co. improve worker efficiency and increases storage capacity 40 to 50%

● A Baker 3000 lb. Fork Truck unloads and stores coils of wire in 45 to 60 minutes per car. This job formerly took four men from four to five hours. Savings: 15-19 man hours or $15.60 per car. Since cars can be unloaded immediately, routing of wire is eliminated.

By keeping machines supplied with wire to keep production going at top speed, efficiency of workers has been increased. Moreover, the truck stacks coils 2 and 3 high, increasing existing storage capacity 40 to 50%. Safer and better working conditions have resulted, aisles are kept clear, and more men are available for productive work.

For more information write

BAKER INDUSTRIAL TRUCK DIVISION of The Baker-Raulang Company
1226 WEST 69th STREET • CLEVELAND 2, OHIO

Baker INDUSTRIAL TRUCKS

IEN - 6657

Anderson BALANCING WAYS

Write For Bulletin No. 7-15

ANDERSON BROS. MFG. CO., Rockford, Ill.

IEN - 6658

choose LAUSON

the long-life engine

Insist on Lauson — the engine that's *first in quality!* Here are just a few of the superior construction features which make Lauson the *Long-Life* engine: Connecting rods have replaceable crank-pin bearing liners.

- Precision ball bearings on both ends of crankshaft
- Fly-ball governor running in oil
- Automotive-type float feed carburetor
- Lauson original design provides direct stream of cool air over both valves simultaneously.
- Always choose Lauson engines ... a better buy because they're better built!

The LAUSON Company

IEN - 6659

TAKE YOUR PICK

from the most complete line of drop-forged wire rope and chain fittings

SEND FOR FREE BOOK

THE THOMAS LAUGHLIN COMPANY

LAUGHLIN

THE MOST COMPLETE LINE OF DROP-FORGED WIRE ROPE AND CHAIN FITTINGS

Did You Miss These?

BEARING ... IEN R-1

CHEMICALS ... IEN R-2

CLAMPS ... IEN R-3

CLEANING ... IEN R-4

CONTROL ... IEN R-5

CONTROL ... IEN R-6

CONTROL ... IEN R-7

CONVEYING ... IEN R-8

CYLINDER ... IEN R-9

DRILLING ... IEN R-10

DRIVE ... IEN R-11

DRIVE ... IEN R-12

ELECTRONIC PRODUCTS ... IEN R-13

FASTENING ... IEN R-14

FASTENING ... IEN R-15

FASTENING ... IEN R-16

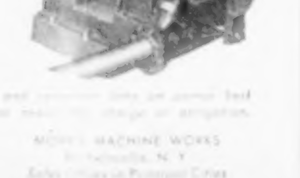
FASTENING ... IEN R-17

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER ... Descriptions ... Ratings ... See Page 36

IEN - 6660

Only the New TYPE "R" MORRIS SLURRY PUMP has these 4 features

1. Gland is under suction pressure only. This feature practically eliminates packing troubles.
2. For dismantling, you need remove only four bolts. No internal studs or bolts ... no troublesome fits or joints.
3. You can remove impeller and liner without disturbing piping.
4. Shell interchangeable for right or left-hand rotation. Suction and discharge nozzles can be rotated to positions in any of four quadrants.



MORRIS MACHINE WORKS

MORRIS CENTRIFUGAL PUMPS

IEN - 6661

Special RUBBER WHEELS

That Dissipate Static Electricity!

Pioneers in the use of COLD RUBBER

INDUSTRIAL RUBBER PRODUCTS BY REPUBLIC RUBBER DIVISION
Lee Rubber & Tire Corporation
YOUNGSTOWN, OHIO
FOR LEE TIRES & TUBES • CONSHOHOCKEN, PA.

IEN - 6662

BE KIND to your back

LET THE *Styl-O-Veyor Junior* DO THE HEAVY LIFTING

$385.00 Complete

A LOW PRICED ECONOMICAL BELT BOOSTER

Bulletin HP20-2A

WRITE NOW FOR COMPLETE INFORMATION

ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza, No. Long Island City 1, N. Y.

IEN - 6663

PRECISION REGULATION

Within .005 psi

FOR MANUAL LOADING SERVICE

HERE'S YOUR REGULATOR

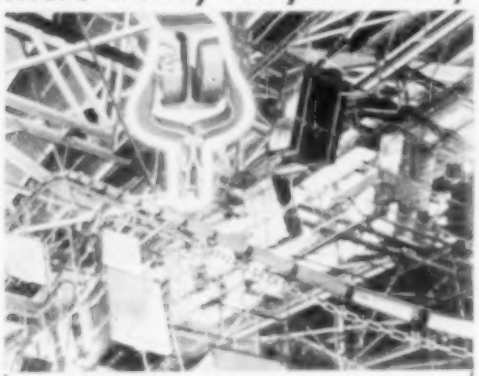
WRITE TODAY FOR BULLETIN PH-10

CONOFLOW CORPORATION
2100 Arch St., Phila. 3, Pa.

ConoControls

▼ REFER TO IEN-6664 IF YOU WRITE THIS MAKER ▼

More trolley for your money



LINK-BELT Ball Bearing Overhead Conveyor Trolley

- Snap-forged steel wheel and bracket
- Simple in design. Fewer parts. Less maintenance
- Dependable high load bearing capacity
- Bearings completely lubricated and sealed
- Operates smoothly and quietly with high efficiency
- Quickly installed on new or existing systems
- User report remarkably trouble free operation

Write LINK-BELT for specific data on this type trolley

LINK-BELT COMPANY

▼ REFER TO IEN-6665 IF YOU WRITE THIS MAKER ▼

FULLERGRIPT PROVES ITS WORTH ON HARRIS OFFSET PRESSES

The 42" x 58" two-color Harris Offset Press, made by the Harris-Seybold Company of Cleveland, employs a series of short brush strips with wedge-shaped tops. These are called wrinkle brushes. They are used on the impression cylinder for a two-fold purpose: (1) to keep the paper lying flat against the cylinder and (2) to remove any foreign matter from the paper.

Harris engineers saw that with Fullergript it is possible to position the brush strip to the moving point of the two cylinders. The small size of Fullergript makes it much easier to assemble in tight places, at the same time providing maximum effectiveness in performing its dual functions.

Fullergript brush strips are made in a variety of shapes and sizes. Maybe there's an unusual application in your plant where Fullergript can help you. Why not get more information by writing today to . . .

DO YOU REQUIRE A SPECIAL MACHINE FOR A BRUSHING OPERATION? You can benefit from our wide experience undertaking and building special brushing machines. No obligation to let your problem before our engineers. Write today.

FULLERGRIPT FULLER BRUSH CO.

INDUSTRIAL DIVISION, 3583 MAIN STREET, HARTFORD 2, CONN.

Did You Miss These? — Continued

FLOORS . . . IEN R-19

GAGE . . . IEN R-19

GAGE . . . IEN R-20

HEATING . . . IEN R-21

HOIST . . . IEN R-22

INSULATING . . . IEN R-23

INSULATING . . . IEN R-24

LOCK . . . IEN R-25

LUBRICATING . . . IEN R-26

MIXING . . . IEN R-27

MOTOR . . . IEN R-28

PACKAGING . . . IEN R-29

PLASTICS . . . IEN R-30

PUMP . . . IEN R-31

PUMP . . . IEN R-32

ROCK DRILLING . . . IEN R-33

SEALING . . . IEN R-34

SEALING . . . IEN R-35

SEALING . . . IEN R-36

All Makers of Parts And All Other Products Are Found In THOMAS' REGISTER — Bearings — Bearings — See Page 56

▼ REFER TO IEN-6667 IF YOU WRITE THIS MAKER ▼

Cut rejections to a minimum!

Compound Stamped Gears are precision made to our own tool and die specs—hold dimensions, flatness and uniformity of WINZELER Stamped Gears in gearing applications. Switch your orders to the "Stamped" Specialists. Our practical tooling plan equal impression results one of the outstanding advantages we have to offer.

Take advantage of our Gear savings—we'll make them from any desired material, or perhaps your specifications for making, bending or moving methods where indicated. Our skilled Stamped Gear experts will gladly help work out your problems. However simple or complex they may be.

ASK FOR Suggestions, Ideas, Samples, Low cost estimate! Write today! No obligation of course.

WINZELER MFG. & TOOL CO.
7116 WEST ARCADE PLACE • CHICAGO 12, ILLINOIS

▼ REFER TO IEN-6668 IF YOU WRITE THIS MAKER ▼

HEVI DUTY ELECTRIC COMPANY

FOR TEMPERATURES FROM 1700° F. TO 2600° F.

Use The New

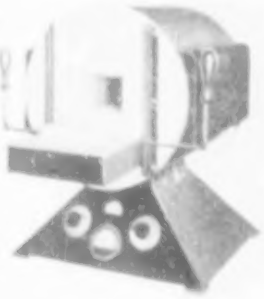
HEVI DUTY "Globar" FURNACE

Type G-05-PT

Inside Diameter 4½" W x 7½" L x 2½" H

3500 WATTS

Write for Bulletin LAB-250



- Zero Heat Loss — Improved Insulation and No Rheostats
- Better Control — Through a 48 Step Tap Changing Transformer
- Easy Replacement — Global Type Heating Elements
- Indicating Pyrometer and Tap Switches Mounted on Sliding Drawer

HEVI DUTY ELECTRIC COMPANY
MANUFACTURERS OF HEVI-DUTY ELECTRIC EQUIPMENT
MILWAUKEE 1, WISCONSIN

▼ REFER TO IEN-6669 IF YOU WRITE THIS MAKER ▼

Fans! FOR ALL INDUSTRY
"Standard Units or Custom Design"

Fans and Blowers . . . are the center of much research and are made into practically any specific air capacity and static pressure requirements. Special or custom designed equipment can also be furnished and our staff of engineers can offer assistance on any problem involving ventilation, heat or air conditioning problems. Send us your specifications for quotation.

Top: Heavy Duty "WORLD AEROFOIL" Fans 24" to 36" Dia.
Middle: 6 Blade "VINATOW" Unit. Also available in 2 and 4 Blade types. Sizes 14" to 24".
Bottom: "DUCTYPE" Direct Drive Blower. Single or Multiple Fan units. Also available with Belt Drive. Sizes 18" to 36".

SOUTH BEND AIR PRODUCTS, Inc. 301 E. COLFAX AVE. SOUTH BEND, IND.

▼ REFER TO IEN-6670 IF YOU WRITE THIS MAKER ▼

WHEN YOU NEED STEEL CALL RYERSON

Contact Ryerson for prompt shipment of dependable steel products. Because of great demand, all sizes are not always in stock but you will find that we can usually take care of your requirements.

PRINCIPAL PRODUCTS

Bars • Structurals • Plates • Sheets • Tubing • Allegheny Stainless • Alloy Steel • Safety Floor Plate • Bobbin • Solder Metal Working Tools & Machinery, etc.

JOSEPH T. RYERSON & SON, INC.

Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco

▼ REQUEST—Identify by IEN-6671 if you write the maker ▼

PREVENT BUNG DRIP

with BOWSER ROTARY HAND PUMPS

- STOP WASTE
- Avoid Slippery Floors
- Keep Storeroom Neat
- SAVE TIME!

NEW Perma-Free ACTION

BOWSER, INC., 1138 Creighton Ave., Fort Wayne 2, Ind.

LIQUID CONTROL SPECIALISTS SINCE 1885

▼ REQUEST—Identify by IEN-6672 if you write the maker ▼

THIS 3-¼" DIA. CIRCLE SHOWS ACTUAL SIZE OF THE CROSS-SECTION OF ORTMAN-MILLER'S CYLINDER WITH 3" BORE

Bore for force-fitted to spec. All machined steel with bronze bearing surfaces—simplified design adaptable to any application. Bores to 4" immediately available. Write for details today!

ORTMAN-MILLER MACHINE CO., INC.
1338-1350th Street, Hammond, Indiana

▼ REQUEST—Identify by IEN-6673 if you write the maker ▼

Cut Cost—Add Strength

Your quantity-run special fastener type parts made EXTRA FAST by the Kaufman Process

CLEVELAND Quality FASTENERS

THE CLEVELAND CAP SCREW COMPANY
2017 East 79th Street • Cleveland 3, Ohio

▼ REQUEST—Identify by IEN-6674 if you write the maker ▼

GAGE . . Dial indicator unit reads material thickness to 1 inch

Source: L. S. STARRETT CO.
100 Starrett St., Athol, Mass.

No. 1015 portable [illegible] a dial indicator with a [illegible] lever by which the measuring spindle can be retracted to admit a piece of work. Removing the work with the spindle in place, the gage is a reading on the dial. The exact [illegible] for the operator. Thread depth is [illegible] to use.

Two thickness capacities are [illegible] with [illegible] graduations reading from [illegible] to .50, and to [illegible] with 100-to graduations reading from [illegible] to .100. The two are known as Types A and B respectively. Approximate [illegible] metals, textiles, paper, plastics, leather, rubber, [illegible], cardboard, card board. Contact points are [illegible] in diameter.

▼ REQUEST—Identify by IEN-6675 if you write the maker ▼

FEEDING . . Motor drive hopper unit particularly for flat cylindrical work

Source: FEEDALL MACHINE & ENGINEERING CO.
27-31 Elm St., Willoughby, Ohio

Model H-100 is a new design in a open type gravity feeder in which a monitor rod is driven by a motor mounted on rotate through the work piece in the hopper. Interfering pieces that happen to be in correct position are accepted and carried to the right side. The remaining pieces are deflected by an [illegible] and always be in position [illegible].

The assembly measures 18 [illegible] diameter with hopper dimensions of 14 by 5 inches. The motor takes ½ hp. The company is prepared to make the required adaptations and special parts to suit the unit for specified work pieces.

All Makers Are Listed - - -
- - - In Thomas' Register

▼ REQUEST—Identify by IEN-6676 if you write the maker ▼

THOMAS' REGISTER
of
American Manufacturers

$15.00 F. O. B. New York
Renewal $12.50

7,900 pages of vital information to facilitate effective purchasing of all products made in U. S. A.

HARTFORD'S CONSULTED BY ALL DEPARTMENT HEADS, ESPECIALLY ALL ON THE TOP—REGISTER ALL FOR EVERYONE IN THE U. S. WHO ARE CONCERNED WITH WHAT TO BUY AND WHERE TO BUY.

96% ABC Paid Circulation

THOMAS PUBLISHING COMPANY
461 EIGHTH AVENUE • NEW YORK 1, N. Y.

▼ REQUEST—Identify by IEN-6677 if you write the maker ▼

CHAMPION
Precision Expanding Mandrel

Entirely new in principle, this machine drive, quick change work mandrel with handling time [illegible] guaranteed concentricity [illegible] without pressing and [illegible].

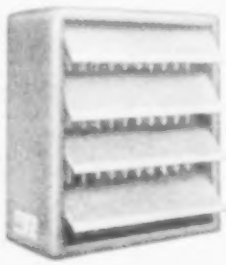
Lower cost production is achieved with faster work, lower labor, less floor [illegible]. Allows a tool to [illegible] from .001" under and [illegible] to .005" over standard size. Replace that [illegible] worn [illegible]. Holds tolerances of less than .0001" run out.

Standard sizes from 1/2" through 2" diameter, graduated by 1/16" to your machine. Special sizes if required. More details on request. Write Dept. IEN.

The WESTERN Tool & Mfg. Co., Springfield, Ohio

▼ REQUEST—Identify by IEN-6678 if you write the maker ▼

[illegible]



nyb

COMET UNIT HEATER

Horizontal Type

Ceiling suspension type with heavy duty, welded steel fin-and-tube heating element. Extra heavy non-ferrous coils also available; suitable for continuous heating service on steam pressures up to 150 pounds or more.

Bulletin 483

Vertical, Projection Type Also Available

For efficient heating from high ceiling areas—for door heaters over small openings—or where the horizontal type Comet Heater is not applicable. Ten basic sizes; capacities from [illegible] to [illegible] Btu.

Bulletin 484

IUHA

nyb THE NEW YORK BLOWER COMPANY
GENERAL OFFICES • 3180-30 SHIELDS AVE. • CHICAGO 16
FACTORIES AT LAPORTE, IND. AND CHICAGO, ILL.

▼ REQUEST—Identify by IEN-6679 if you write the maker ▼

RECORDING MECHANICAL COUNTER ACTUATED BY AN ELECTRICAL IMPULSE

It operates on the output of a scaler, photo tube, or other electrical unit . . . permanently records counts on a 2¼" tape . . . automatically resets to zero.

In Radioactive Research it saves precious time by eliminating many hours of manual labor, resulting in greater economy and efficiency.

In Industry it maintains a permanent record automatically, recording production and time each hour.

Write for illustrated circular S.C. 12

STREETER-AMET COMPANY
Automatic Weight Recorders and Scales
High Speed Counters—Since 1888
4101 Ravenswood Avenue Chicago 13, Illinois

IEN - 6680

Not cut...Not cast... but Precision FORGED by AMGEARS!*

Send blueprints or specifications giving shaft speeds, horsepower, center distances and gear ratios. We'll tell you precisely what Amgears can do to save you money and eliminate gear failures.

*ASA — Accepted Mark

Also: Production and Precision Cut and Ground Gears

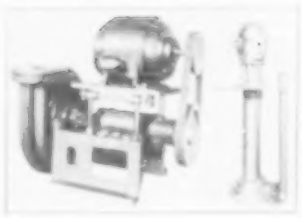
AMGEARS, INC.
6633 West 65th St., Chicago 38, Ill.
PORtsmouth 7-2100

AMGEARS, INC. CHICAGO 38, ILLINOIS

IEN - 6683

PUMP . . Rubber lined centrifugal for liquids containing abrasive solids

Source: ALLIS-CHALMERS MFG. CO.
909 S. 70th St., Milwaukee 14, Wis.



New method

The steel impeller

Bulletin 08B231L

IEN - 6686

FASTER DRIVING!

EASIER TIGHTENING!

STRONGER ASSEMBLIES!

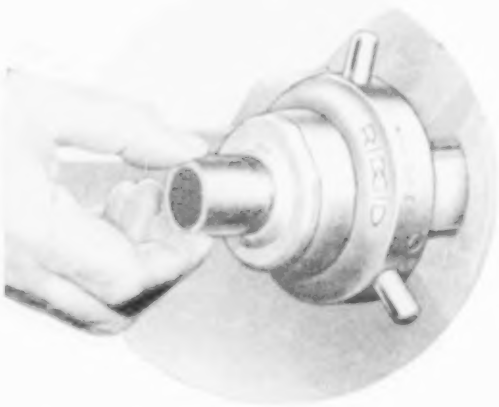
SEND FOR THIS FOLDER

DANLY

DANLY MACHINE SPECIALTIES, INC.
2100 South 52nd Avenue, Chicago 50, Illinois

IEN - 6681

Extra-Easy Threading OF SHORT NIPPLES



"This RIDGID nipple chuck sure cuts the monkey-business out of threading short nipples."

New RIDGID Nipple Chuck fits any threading machine, power drive or vise

● Typical RIDGID worksaver advantages in this new nipple chuck — to speed every short nipple threading job! Fits any threading machine, power drive or vise—no special tools, parts or adjustments. No adjusting or changing of stop plug—it's an integral part of nipple chuck—automatically in position for use. Threading nipple is released instantly by turn of nipple chuck—easily unscrewed by hand. Pipe adaptors for ¼" to 1½", chuck takes 2" pipe. Ask for this new efficient nipple chuck at your Supply House.

FREE Patented Carrier for any set.

RIDGID
WORK-SAVER PIPE TOOLS
THE RIDGE TOOL CO. • ELYRIA, OHIO

IEN - 6684

COOLING . . Tube type exchanger for hydraulic fluids, lubricants, water

Source: YOUNG RADIATOR CO.
719 Marquette St., Racine, Wis.

Type R

Heads

Catalog 1118,

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 50

IEN - 6687

It Cuts . . It Smooths . .

Try it for yourself! Comparison will prove that the new NORTON REINFORCED HUB WHEEL is the strongest and safest cutting wheel, look in the designed and design wheel of it type in the market. Contact your Norton distributor or supplier or distributor for full details.

NORTON COMPANY, WORCESTER 6, MASS.

IEN - 6685

O-RINGS by INJECTION MOLDING

Dependable Hydraulic Seals

Minnesota O-Rings function in air or gas systems as well as in hydraulic systems. Air cylinders . . . hydraulic valves . . . heating mechanisms . . . water pumps . . . heating machines . . . refrigerators . . . motors . . . lubricators . . . are a few of their uses. Minnesota's exclusive injection process makes possible very close dimensions, uniformity in mass production and downright economy. We use special compounds of synthetic rubber to meet your exact requirements. Let us quote on your next hydraulic packing installation.

Manufacturers of all types of small rubber parts

Write for O-Ring Catalog

MINNESOTA RUBBER & GASKET CO.
3640 WOODDALE AVE., MINNEAPOLIS 16, MINN.

IEN - 6688

1000 CAPACITY TACKER Guaranteed for LIFE ! !

WITH 1000 STAPLES ONLY $4.95 Rubber Tip included

PALMGREN 1000 TACKER

The popular 1000 Tacker is a everywhere worker for most industries using an Upholstery Stapler. Some have certain features, but all from who have tried and used a PALMGREN 1000 TACKER swear by them as the greatest time and money saving machines ever manufactured.

1000 SHOTS WITHOUT REFILL!

Saves Time • Cuts Cost • Speeds Jobs

Just imagine what it means to stop, forget of loading the stapler, refilling, and then every 100 minutes. Imagine being able to tacking 1000 times without a single stop, and the average tacker then would need reloading to PALMGREN 1000.

SPECIAL INTRODUCTORY OFFER TO ALL INDUSTRIES

We want all industries to know and prove the PALMGREN 1000 TACKER. Put it to work alongside any other tacker yourself. Then you can convinced SAVE MONEY! Send coupon now and get the TACKER and 1000 FREE. Price of 1000 staples is 1 cent each. Tacker FREE for a limited time. Don't delay. Order today.

TACK ON

WOOD
FABRIC
RUBBER
LEATHER
PLASTIC
PAPER
SCREENS
FELT
FIBRE

Wood - Leather

Paper - Felt

CHICAGO TOOL and ENGINEERING CO.
Mfr. of Premium Products Since 1923
2406 South Chicago Ave., Chicago 17, Ill.

IEN-6689

NEW DEMING MOTOR MOUNT PUMPS

Vertical and Horizontal

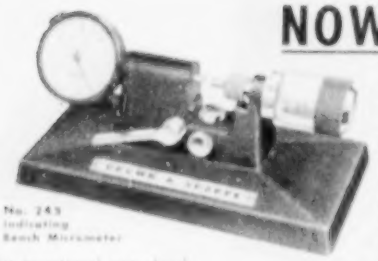
Send For New Bulletin No. 4350

BIG RANGE OF SIZES

50 standard units (25 Type "V" vertical units and 25 Type "H" horizontal units). Capacities up to 200 g.p.m. Heads up to 165 ft. Motors ¼ H.P. to 2½ H.P. Speeds 1750 and 3500 r.p.m. Maximum total pressure 125 lbs. Maximum suction pressure 50 lbs. Maximum recommended liquid temperature 200°F.

Write THE DEMING COMPANY
521 BROADWAY • SALEM, OHIO

IEN-6690



NOW

No. 243 Indicating Bench Micrometer

This sensational new development has no counterpart in the field of measuring devices! The new Brown & Sharpe No. 243 Indicating Bench Micrometer not only measures fine small parts from 0 to ½" by ten-thousandths, but can be used as a quick, accurate comparator. Large dial indicator gives instantaneous direct readings of variations, in ten-thousandths, from any desired setting. For full details, write for new illustrated bulletin. Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

A Bench Micrometer that Both Compares and Measures!

We urge buying through the Distributor

BROWN & SHARPE IBS

IEN-6691

MODERN MACHINERY

HEAVY-DUTY

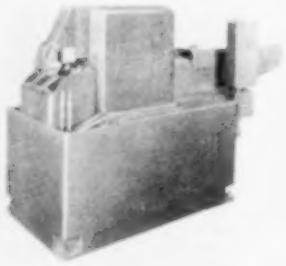
FOR ALL TYPES OF EQUIPMENT

MINNEAPOLIS-MOLINE
MINNEAPOLIS 1, MINNESOTA

IEN-6692

LATHE . . Hollow spindle automatic with cam controlled feed and operation

Source: MOTCH & MERRYWEATHER MACHINERY CO.
713-17 Penton Bldg., Cleveland 13, Ohio

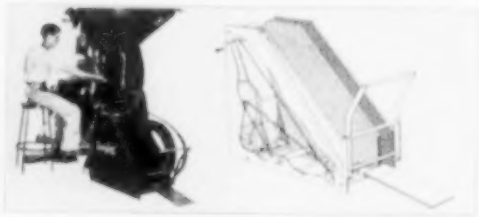


The spindles [illegible] Work pieces [illegible]

IEN-6693

PRESS TOOLS . . Strip stock cradle minimizes manual handling at a press

Source: ROWE TOOL & DIE CO.
1504-8 N. Industrial Blvd., Dallas, Texas



A coil of strip metal is rolled into this new feeder equipment, known as the Easy Load, to run upon two motor driven rollers. A side plate within the stock housing is adjusted vertically by turning a crank to accommodate varying stock widths and the strip is led to the stock and back to the press over a linked assembly of levers. This assembly is acted upon by the strip to start and stop the motor to maintain a suitable stock loop ahead of the press.

Two sizes weigh 290 and 330 lb. [illegible] to 30 and 40 in. in diameter and to 10 in. in width. Load capacity is 500 and 1000 pounds. The motors [illegible] Maximum feed speed of the new unit is 80 ipm.

All Makers of Tools And All Other Products Are Listed In THOMAS REGISTER Distributors Ratings See Page 56

IEN-6694

Precision ROD CUTTING at High Speed

with the New **DI-ACRO ROD PARTER**

The DI-ACRO Rod Parter further increases applications of "DIE-LESS" or "DIE ACRO", as a complementary operation to DI-ACRO Tube, Bar, Strip, Section and Sheet.

Do you require precision? DI-ACRO Rod Parter is designed for the ultimate in precision. The tools are [illegible]

Do you need speed? The Rod Parter [illegible]

PARTS OFF MANY MATERIALS
Alloy and cold rolled steel
Stainless steel
Chrome Molybdenum
Copper Brass
Aluminum Bronzes
Many types of plastics
Fiber Rubber Wood

OFF DIE-LESS DUPLICATING [illegible]

CATALOG [illegible]

Pioneered "DIE-ACRO"

DI-ACRO **O'NEIL-IRWIN MFG. CO.**
[illegible] Avenue, LAKE CITY, MINN.

IEN-6695

CM PULLER

. . . the handiest tool in the plant

Just think of the jobs you can do with this sturdy, low-cost puller

LIFTS OR PULLS at any angle up to 12,000 POUNDS

CHISHOLM-MOORE HOIST CORPORATION
(Affiliated with Columbus McKinnon Chain Corporation)
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
Sales Offices: New York, Chicago, Cleveland • Distributors Everywhere

IEN-6696

HIGH VACUUM *Plumbing* BY DPi

When you call upon DPi for advice on high vacuum systems, you know that you get a long-established high vacuum engineering organization with the most advanced thinking in the field. Plus a group of [illegible] high vacuum pumps, and a [illegible] vacuum equipment. Plus [illegible] high vacuum [illegible] and [illegible] right [illegible] right [illegible]

Vacuum tube manufacture [illegible] Prompt DPi [illegible] to get New Ideas [illegible] vacuum equipment [illegible] and storage. Write today concerning DPi vacuum plants [illegible] a year's course of news and tips.

While [illegible] high vacuum [illegible] Your inquiry will receive prompt consideration.

VACUUM EQUIPMENT DEPARTMENT
DISTILLATION PRODUCTS *industries*
761 Ridge Road West, Rochester 3, N. Y.
DIVISION OF EASTMAN KODAK COMPANY

IEN-6698

Control Costs with

OVER-UNDER SCALES

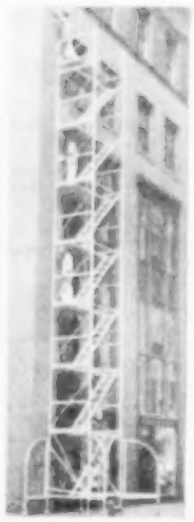
for...Packing
...Checkweighing
...Inspection

Toledo has the scales you need for speedy, accurate Over-Under weighing. Complete line for every month in packing, checkweighing and inspection. Models mounted on 1 lb. to ... capacities to 100 lb. Send for Booklet C-101. Toledo Scale Company, Toledo 1, O.

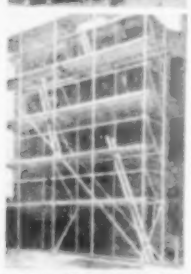
TOLEDO

HEADQUARTERS FOR SCALES

IEN-6699



ALUMINUM made for Van Right Inc.



ALUMINUM made for Fisher Scaffolding Co.

ALUMINUM made for Universal Scaffolding Co.

ALUMINUM made by Jackson Gear Products Co.

light work is fast work

Cutting erection time up to 75%, isn't surprising when you realize that well-kits of Alcoa Aluminum weigh half as much as ordinary units. Even the larger well-kits can be erected in 20 minutes by 2 men. Quickly moved on the job... easily loaded and unloaded from your trucks, they often pay for themselves in savings from a single job.

For a list of manufacturers, write: Aluminum Company of America, 1421G Gulf Bldg., Pittsburgh 19, Pennsylvania.

ALCOA FIRST IN ALUMINUM

IEN-6701

DUST COLLECTING . . Filter unit removes dust from air at a machine

Source: HISEY-WOLF MACHINE CO.
Edwards & Madison Sts., Cincinnati 8, Ohio

Capacity ... The air ...

IEN-6702

HANDLING . . Magnesium fork, four to seventeen prongs, for cans

Source: MODERN LIGHT METALS INC.
1920 Elston Ave., Chicago 22, Ill.

Prong length and spacing as specified

IEN-6703

PUMP . . Motor driven centrifugal, 1 to 4 in., rates 10 to 1,000 gpm.

Source: MARLOW PUMPS
46 Greenwood Ave., Ridgewood, N. J.

Close Coupled ...

All Makes of Pumps and All Other Products Are Listed In THOMAS REGISTER — Alphabetical — Buying — See Page 50

IEN-6704

5 MACHINES IN 1!

THIS SINGLE UNIT HANDLES WORK OF
- MOTOR TRUCK
- FORK-LIFT TRUCK
- STRADDLE-BUGGY
- TRACTOR
- YARD CRANE

LULL Traveloader

IT'S NEW BY LULL ...

LULL MANUFACTURING CO.
3812 E. 44th St. • Minneapolis 6, Minn.

IEN-6705

TO ANYWHERE IN THE U.S.A.

PROMPT SPEEDY DELIVERY OF UNIVERSAL DRILL BUSHINGS

You will receive prompt speedy delivery of any one Universal Drill Bushings, as we point to the United States — orders for standard size bushings will be filled and shipped within 24 hours — because our warehouses are selected and stocked so as to give excellent service within days. Order by telegram, phone, wire or write from our nearest Universal warehouse at 1000 Broad Street, Newark, N. J., 3015 6th Ave., Seattle, Wash., or Frankenmuth, Michigan.

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 6, MICHIGAN

IEN-6706

FOR POLISHING
FOR BUFFING
FOR TUMBLING
FOR BLASTING

SIMONDS ABRASIVE CO.

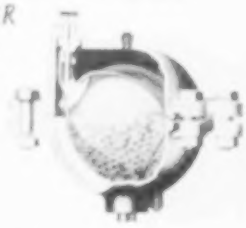
ABRASIVE GRAINS Fused crystalline aluminum oxide abrasive. In all standard grain sizes, as "except the mill" sizes. Hard, sharp, tough. Uniformly sized. Specially treated to remove impurities. Produced under complete Simonds control and trademarked Bevalon, Borodust, Borogrit and SANS-SUP. Write for inspection samples and prices. Give grain size and intended use.

SIMONDS ABRASIVE CO., 5512 TACONY ST., PHILA. 37, PA.
DISTRIBUTORS IN ALL PRINCIPAL CITIES

IEN-6707

GET RID OF AIR ACCUMULATIONS IN PIPE LINES...

A BIG TROUBLE SAVER THAT COSTS YOU LITTLE!



When air lodges at high spots in pipe lines, it reduces the effective area of the pipe, creates a friction head, lowers pumping capacity, and may result in serious water hammer!

Simplex Air Release Valves bring you a safe, efficient cure for these difficulties — venting air automatically before it can cause damage. And you pay for a standard valve—

ONLY $29.50 F.O.B. Works

Write for free bulletin to Simplex Valve & Meter Co., Dept. 7, 6717 Upland Street, Philadelphia 42, Pa.

The Simplex Air Valve is easily installed — proven in action — ample in capacity. Standard valves for pressures up to 150 p.s.i. — special valves for pressures up to 800 p.s.i. Thousands have been in successful use for over 30 years.

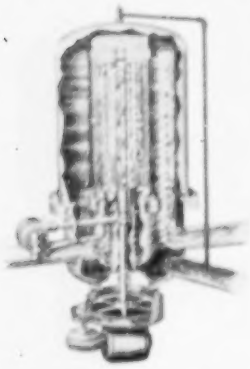
IT'S SIMPLEX IT'S ACCURATE

SIMPLEX
VALVE AND METER COMPANY

IEN-6708

Save Water Automatically

and save money, too!



Continuously Self-Cleaning without Fluid Waste

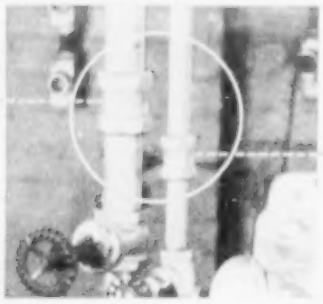
CUNO

Fluid Conditioning

Removes More Sizes of Solids from More Types of Fluids

NO FLUID IS BETTER THAN ITS FILTRATION

IEN-6709



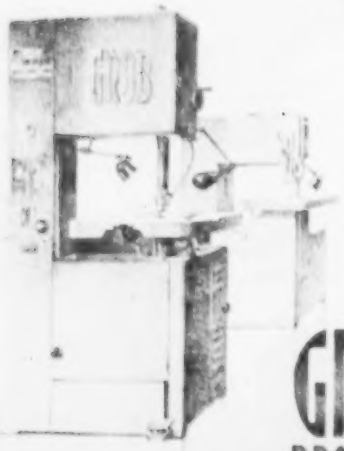
"FLEXIBLE-TIGHT" JOINTS FOR FACTORY PIPING

For piping up to 2" in diameter, Dresser style 38 "No-Thread" Fittings provide quick, permanent connections. On equipment piping, on gas, oil, water, air lines, these hands-joints stay tight despite vibration, expansion and contraction. No pipe threading, no exact pipe alignment. The only tool needed is a wrench. Write today for catalog.

DRESSER "NO-THREAD" FITTINGS

IEN-6710

SAWING FILING



GROB BROTHERS

GRAFTON WISCONSIN

IEN-6711

TRUCK . . Two wheel barrel unit grips, tilts, carries, rates 1,200 lb.

Source: MODERN EQUIPMENT CO.
2007-11 Cuming St., Omaha 2, Nebr.

IEN-6712

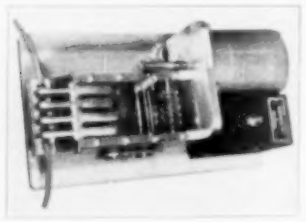
BROACHING . . Push type cutter for 7/8 and for 1 in. keyway machining

Source: duMONT CORP.
duMont St., Greenfield, Mass.

IEN-6713

PUMP . . Compression finger design maintains flow through resilient tube

Source: PROCESS & INSTRUMENTS
58-62 Greenpoint Ave., Brooklyn 22, N. Y.



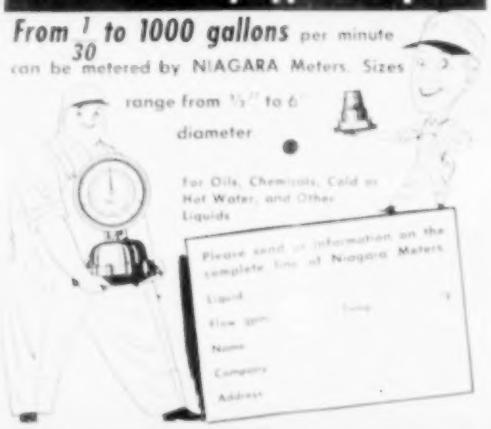
Bowman Infusion Model 2 is a new pump employing four rocker-arm compression fingers that apply in progression to compress a rubber tube and thus propel the fluid through the tube. The fingers are actuated by a cam shaft that is gear connected to a motor. The frame mounts permits selection of speeds to be steps for delivery between 2 and 12 cc. per minute.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 58

IEN-6714

There's a Buffalo NIAGARA METER to Handle Almost Any Volume or Any Type of Liquid:

From 1/30 to 1000 gallons per minute can be metered by NIAGARA Meters. Sizes range from 1/2" to 6" diameter.



BUFFALO METER CO.
2929 MAIN STREET BUFFALO, N. Y.

IEN-6715

The KENT Combination
Dry Suction Cleaner and Electric Mopper

★ FOR DRY PICK-UP
★ FOR WET PICK-UP

WITH THE KENT FLOOR MACHINE, the KENT Combination makes the perfect "Fast Cleaning Team"!

Write for Literature to:

CLEAN WITH KENT EQUIPMENT

THE KENT COMPANY • 437 CANAL ST. • ROME, N. Y.

IEN-6716

New Cordon leather belting does not stretch!

Square ends for lacing supplied as standard. Belts are made endless to your specification or ends can be prepared for splicing.

S. R. SIKES COMPANY
Established 1881
1026-30 S. Third St., Minneapolis 15, Minn.

IEN-6717

IN LEATHER PACKINGS... Only PHILAPAC CAN GIVE YOU

*Lifetime Lubrication**

* The unique Philapac Formula-37 for "lubrication of leather for life" assures leather packing action that actually outlasts the application.

Simply state the condition—let PHILAPAC the leather packing that's kept pace with the times, do the rest!

Lifetime Lubrication is one reason why you can count on PHILAPAC for more. Tailored Performance is another. Both lubricant and leather matched to the service conditions of your motion. Here!

No downtime, no lapse in performance — because Philapac Formula-37 builds permanent lubrication into the inner pores of every fiber!

Write for complete info on PHILAPAC and PHILABELT — and what's new in 3-D.

PRODUCT OF
PHILADELPHIA *Belting Company*
5TH & SPRING GARDEN STREETS • PHILADELPHIA 23, PA.

PHILAPAC IN PACKINGS . . . PHILABELT IN BELTING

▼ DIRECT—Quote IEN-6718 ▼

STAINLESS STEEL FLOATS

Your product will be better, will require virtually no maintenance, if it is equipped with Chicago's stainless floats. In fifteen years of making welded stainless steel floats, Chicago Float Works has produced many thousands with excellent results under severe operating conditions. This enviable record assures you of the finest, most dependable floats available to build into your products or for replacement use.

CHECK THESE FEATURES

- Standard Diameters 2" to 10"
- Pressures to 1000 lbs.
- Temperatures to 800° F.
- All Standard Spud Connections
- Top quality 18-8 Stainless Steel
- Non-corroded weld for superior strength, and corrosion resistance available where required.

WRITE FOR FREE CATALOG

CHICAGO FLOAT WORKS, INC.

2326 So. Western Avenue • Chicago 8, Illinois

▼ DIRECT—Quote IEN-6719 ▼

BETTER SEEING

makes a Big difference in WORK OUTPUT / REJECT LOSS / COST PER PIECE

LOCALITE
THE VITAL SEEING ZONE
ON MACHINE OR BENCH

Small Investment Pays Big Dividends

The faster and better a worker sees, the quicker and more accurate his production. Good light on the critical work area is his most vital tool. Only with Localites can there be simple illumination and flexibility for position be provided to direct the right illumination exactly as needed for the particular task.

Thousands of plants are now profiting with Localite "seeing" tools. You too, will see a big difference with a Localite on every precision task — bench and machine.

MODEL 32-H-174

$4.60

MODEL 3267-H-174

$5.56

MODEL 1470-P-172

$6.52

★ Write for this booklet on "Balanced Lighting" and complete catalog of Localite and Generalite models.

fostoria BALANCED LIGHTING — GENERALITES • LOCALITES

THE FOSTORIA PRESSED STEEL CORP.
FOSTORIA, OHIO, U.S.A.
Localites are available through selected distributors everywhere

▼ DIRECT—Quote IEN-6721 ▼

RELAY . . Six pole, double throw, has ½ amp. rating on 110 volt dc.

Source: STEVENS-ARNOLD INC.
20-24 Elkins St., South Boston 27, Mass.

New assembly of the previously developed Milliken relay now requires a 20-pin base, and provides a six pole double throw unit with the same operating characteristics as the previous relays in the line. These low operating currents can be as short as 3 milliamps. Life expectancy is in the order of 25 million operations. The operating time is around but 20 gr 6 ms 18 ms, bound bounce is 2½ milliseconds. Laminated is to a sealed housing.

▼ DIRECT—Quote IEN-6722 ▼

HANDLING . . Plywood tote box with tapered sides for nested storage

Source: G. B. LEWIS CO.
4 Montgomery St., Watertown, Wis.

Three pts. pack. [illegible]

▼ DIRECT—Quote IEN-6723 ▼

PROTECTING . . Illuminated shield, includes switch to shut machine down

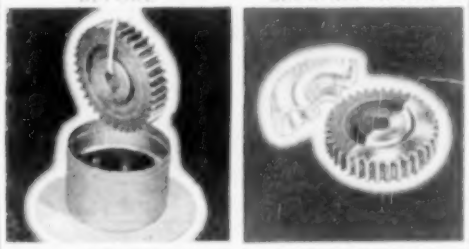
Source: JUNKIN SAFETY APPLIANCE CO.
1000 Hill St., Louisville 8, Ky.

ElectroLock shield has been designed to position a rectangle of safety glass in an 8 by 10 in. hinged frame on a machine such as a grinder to protect an operator against flying sparks or particles of wheel or work. The frame is connected to a mercury switch so be stored into the closed to the motor driving the machine so the motor will be opened and the machine will stop if the shield is hinged out of position.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 50

▼ DIRECT—Quote IEN-6724 ▼

HOT MELT PLASTIC COATINGS for GEARS • TOOLS • PRECISION PARTS



Dip — Coated • Protected

DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's dielectric, transparent plastic coatings. Merely melt coating briquette, dip parts and cool. Lasts indefinitely. Tough, abrasive, non-toxic, and resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts, save money.

Write for Bulletins and Free Samples
Fidelity Chemical Products Corp.
470 Frelinghuysen Avenue, Newark 5, N. J.

▼ DIRECT—Quote IEN-6725 ▼

General Electric Announces

A MASTER SELECTOR SWITCH

for remote control

[illegible]

GENERAL ELECTRIC

▼ DIRECT—Quote IEN-6726 ▼

Stop Losing Money in Pressure Reducing

USE

MASONEILAN
PRESSURE REGULATORS

Masoneilan Reducing valves make a hit with production and maintenance men in all types of industries because they furnish economical pressure control. Thereby dependable operation, low maintenance cost and maximum uninterrupted service mean through service control and reduced waste.

No. 33 for steam and air service. Sizes from ¼" to ¾". Reduced pressure ranges 10 to 20, 20 to 40, 40 to 100 psi. Maximum working pressure 200 lbs.

No. 227 for water service. Sizes ¼" to 2". Reduced pressure ranges 10 to 60 psi. Maximum working pressure 150 psi. Also available for air service from ¼" to 1".

MASON-NEILAN REGULATOR COMPANY
1188 ADAMS STREET
BOSTON 24, MASS., U. S. A.

▼ DIRECT—Quote IEN-6727 ▼

That's what you need—greater metal cut-off capacity—to help increase production, a big advantage of the

JOHNSON MODEL J BAND SAW

It cuts 10" rounds, 18" flats. It's sturdy, fast, has extra rigidity that permits higher speed operation and extra accuracy. To decrease your cost of cut-off work, must be a Johnson Band Saw.

Also a smaller, speedy, lighter 9-inch MODEL B [illegible] with all the accuracy of the larger model. Capacity 5" rounds, 10" flats.

Write for CATALOG!

JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

IEN-6728

DRACCO CORPORATION

PNEUMATIC CONVEYORS • DUST COLLECTORS

IEN-6729

FAIRBANKS-MORSE GENERATING SETS

Need power for isolated construction jobs? Load a Fairbanks-Morse generating set onto your truck! You'll have plenty of power for operating tools, hoists, compressors and other needs.

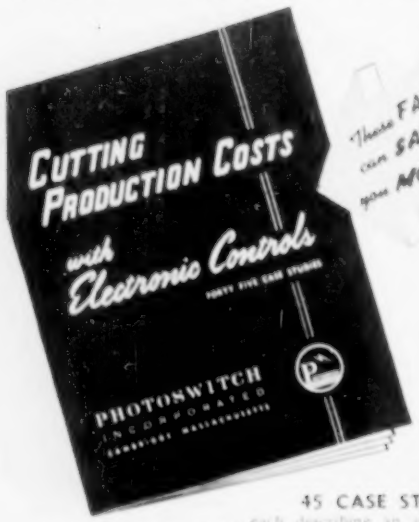
There is a generator of the size you need in the Fairbanks-Morse line, which ranges from 500 to 32,000 watts capacity—AC, DC, or AC-DC.

Ask your construction supply dealer to give you all the details. If he hasn't the model on hand that you need, he can get it quickly. If you don't know who handles Fairbanks-Morse generators, write Fairbanks, Morse & Co., Chicago 5, Illinois.

FAIRBANKS-MORSE,
a name worth remembering

Diesel Locomotives and Engines • Electrical Machinery • Pumps • Scales
Home Water Service and Heating Equipment • Rail Cars • Farm Machinery

IEN-6730



45 CASE STUDIES

. . . each describing an industrial control problem which has been solved through the use of electronics. Not a catalog . . . it shows HOW photoelectric and electronic controls count, guard, sort, weigh, measure, maintain liquid levels, program operating cycles and do countless other tasks with unfailing accuracy and amazing speed.

Write for your copy today

PHOTOSWITCH INCORPORATED
75 Broadway, Cambridge 42, Massachusetts

IEN-6731

PROTECTING . . . Eye glass wipers are packaged in metal wall dispenser

Source: DOW CORNING CORP.
P. O. Box 592-A, Midland, Mich.

Sight Saver dispenses the tissue packaged for the complete wiping, rub up or clean the surface of eye glasses and goggles. The dispenser can also function as a supply guard for sensitive particles in a dust tight unit. The dispenser as shown is for wall installation.

The Tissues supplied with the 7 x 7 inch, 100% rag impregnated gelatin, the company's account, who is research chemist and owner of some 14 patents, are chemically neutral and leave no residue. The tissues are packed in moisture proof cartons for sanitary efficiency and long shelf life.

IEN-6732

MOTOR . . . AC. enclosed design, sealed ball bearings, for loom drive

Source: LOUIS ALLIS CO.
425-29 E. Steward St., Milwaukee 7, Wis.

Illustrated is the Champion, a 1/6 hp. motor in the company's new Linear Motor Line, which incorporates exclusive Linear Motor Design. Dimensions are standard. Set up for 115 v. 60 cycle. Dimension 214 shown is for standard flat mounting. Other mounting arrangements are available.

Characteristics include quiet, smooth and more durable operation in high step or reduced speed, power and torque. The motor is built with the use of selected Bearbrass, Linear Motor parts, starting a 5 hp. unit of the same design on a 1/6 hp. motor, smooth but amazing.

IEN-6733

STANDARDS . . . Graphical symbols for heat-power equipment in new 8-page bulletin

Sixth in a series of standards on engineering symbols, the new bulletin is concerned with graphical symbols as standardized ASA Z32.2.9 (1954) by Sectional Committee. It supersedes 34 of Sheets for heat power equipment such as condensers, cooling evaporators, heat exchangers, steam generators, turbines.

All Makers of These And All Other Products Are Listed In THOMAS REGISTER Headquarters Rulings See Page 10

IEN-6734

IEN-6735

You are SURE of instant, unfailing safeguards when you install EVERLASTING VALVES with Pendulum Stop on your fire protection system. The valve action is immediate and positive . . . the flow is full and unimpeded . . . there's no danger of sticking, binding or wedging. Made in all sizes from 1 in. to 8 in. and may be arranged for control from any location. Write for Bulletin E-52C describing these valves in detail.

EVERLASTING VALVE CO., 49 Fisk St., Jersey City 5, N. J.
Trade-Mark "EVERLASTING"—Reg. U. S. Pat. Off.

Everlasting Valves FOR EVERLASTING PROTECTION

IEN-6736

Grinnell-Saunders Diaphragm Valves
power-operated
by Bendix-Westinghouse Rotochamber Top-works

- Rolling seaver type of seal . . . independent and positively frictionless. No packing glands nor lubrication.
- Compact pneumatic piston cylinder. Height from center line to top, 18 1/2. Flanged and threaded valves, sizes 8 1/2, are interchangeable under the same pneumatic units 7 1/4.
- Tested up to seven million strokes without sign of wear.
- Operated with air or hydraulic pressures up to 100 lbs. for pressures up to 100 pounds in the line being controlled, only 10 lbs. unloading pressure required under average conditions. No pressure reducing valves needed for pressures up to 100 pounds because of unloading area. Travel stops incorporated in the valve bonnet design.
- Easily adapted without removing top works from body.

YOU GET THESE ADVANTAGES IN ANY GRINNELL-SAUNDERS DIAPHRAGM VALVE:

Diaphragm isolates working parts from the fluid, preventing corrosion of these parts and contamination of the fluid; diaphragm lifts high for streamlined flow; diaphragm presses tight for positive closure, even with suspended solids in the line; body, lining and diaphragm materials to meet service conditions; simple maintenance.

Get the whole story on this and other Grinnell-Saunders Diaphragm Valves. Send for Catalog.

GRINNELL

Grinnell Company, Inc., Providence 1, R. I. Branches: Atlanta • Billings • Buffalo • Charlotte • Chicago • Cleveland • Dallas • Kansas City • Houston • Long Beach • Los Angeles • Milwaukee • Minneapolis • New York • Oakland • Philadelphia • Pittsburgh • Portland • St. Louis • St. Paul • San Francisco • Seattle • Spokane

IEN-6738

ERTEL STAINLESS STEEL SELF-PRIMING PUMP

For pumping corrosive liquids, chemicals, drugs, cosmetics, foods, syrups, wines, whiskeys, pharmaceuticals, vinegar, etc.

MODEL ESP

ERTEL ENGINEERING CORPORATION
KINGSTON NEW YORK

MANUFACTURERS OF HIGH GRADE ERTEL ASBESTOS FILTER SHEETS
ASBESTOS SHEET FILTERS • CYLINDER TYPE DISC FILTERS
PYROGEN FILTERS • VACUUM BOTTLE FILLERS • MIXERS • CAPPERS
CENTRIFUGAL AND SELF-PRIMING STAINLESS STEEL PUMPS

IEN-6739

Another Problem **SOLVED—**

ELIMINATING ALIGNMENT HEADACHES WITH

Bendix

Eclipse Flexible Metal Hose

Use of rigid piping was originally attempted in making multiple fuel line connections to this steam generator. Alignment was such a problem, however, that this type of installation was given up. Bendix Flexible Nipples were then tried and solved the problem immediately. On any installation where alignment is difficult—where expansion joints or unusual pipe bends are required—solve your problems the easy way with Bendix Flexible Metal Hose. Write today and let our engineers work out your problem with you.

Engineered to your requirements in 85-15 bronze, 347 stainless steel, stainless steel, Monel, beryllium copper, cupro nickel and other special alloys.

LOOK FOR THE ✓ MARK OF QUALITY

ECLIPSE-PIONEER DIVISION
BENDIX AVIATION CORPORATION
TETERBORO, NEW JERSEY

Canadian Representative: The Holden Co., Ltd., 614 St. James Street, West Montreal 3, Canada
Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, New York

IEN-6741

LUBRICATING . . Capillary oil cup mounts under a bearing to feed upward

Source: TRICO FUSE MFG. CO.
2948 N. Fink St., Milwaukee 12, Wis.

IEN-6742

WELDING . . DC. arc electrode for low-alloy high-tensile steels

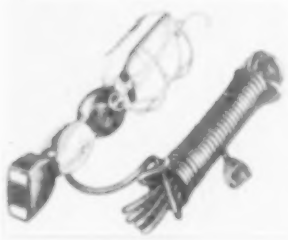
Source: GENERAL ELECTRIC CO.
Dept. 6X-201, Schenectady 5, N. Y.

Corresponds to AWS Class E7010

IEN-6743

LIGHTING . . Portable light and cord with permanent magnet base

Source: STANDARD PORTABLE CORD DIV.
1302 E. 2nd St., Jamestown, N. Y.



IEN-6744

LOwer

PRODUCTION COSTS WITH *KRAUS* AUTOMATIC HOPPERS

Typical Tumble Hopper

USE THEM FOR...

1. Machining
2. Assembling
3. Packaging
4. Sorting

VERSATILITY. Basic hoppers can be tooled for a wide variety of pieces.

LARGE CAPACITY. Up to 2.4 cu. ft. on 33" tumble type. Eliminates frequent refunding and saves labor.

Send samples with delivery rate and orientation requirements to:

KRAUS DESIGN INC.
948 EXCHANGE ST. • ROCHESTER 8, N.Y.

IEN-6745

Conveyor system cuts labor costs for Chicago tanner

CYCLONE FENCE DIVISION

CYCLONE METAL CONVEYOR BELTS

UNITED STATES STEEL

IEN-6746

NEW

POSITIVE CLUTCH

"Dyno-Mite®" Screw Drivers give you . . .

NEW FLEXIBILITY! For the vast number of screw driving applications demanding variable torque, Millers Falls new positive clutch offers tremendous advantage. Wrist kick, not controlled by driving pressure, any desired torque can be applied — the harder you push, the harder it drives.

NEW ECONOMY! These new *Positive Clutch* "Dyno-Mite" Screw Drivers give you the same smooth, dependable operation and high-inspired Millers Falls famous "Adjustomatic." Clutch models — but simplicity of design makes possible substantially lower prices.

NEW SPEED! Because the driving torque can be increased or decreased at will, the operator soon develops the skill to use the power needed to drive each individual screw, and a very high rate of production can be attained. A wide range of speeds in the units themselves is available.

Write today for name of your nearest distributor and full details on Millers Falls "Adjustomatic" Clutch Screw Drivers and the new *Positive Clutch* "Dyno-Mite" models.

MILLERS FALLS COMPANY • Dept. P • GREENFIELD, MASS.

IEN-6747

WHITNEY WOODRUFF TYPE KEYS

Cut Production Costs . . . Permit Ease of Assembly

HERE'S HOW

- Eliminates skilled labor in key seat cutting and key fitting operations.
- Are easy to assemble because of flat top frontal and starting radius.
- Keys reaches deep into shaft and is easily unbolted, no setting is to withstand greater stress.
- Offer greater resistance to shaft fracture due to shape of key set and permanent key fit.
- Simplify key seat cutting in tapered shafts.

Whitney Woodruff Type Keys are made to American Standard and sizes and Whitney Standard sizes for special applications. They are available from Whitney distributors throughout the country or WHO.

WHITNEY CHAIN COMPANY
202 Hamilton Street, Hartford 2, Conn.

BREITT—Direct to IEN-6748 (you write the make)

NEW!

low-cost, easy-to-install flange-mounted ball bearing unit

The Fafnir Flangette

incorporating Fafnir Wide Inner Ring Ball Bearing with Self-Locking Collar

Simple, low cost housing idea. Eliminates costly machining, simplifies maintenance. Pair of pressed steel flanges bolts to any part of machine, provides lightweight, compact, sturdy housing for standard Fafnir Wide Inner Ring Ball Bearing. Fafnir Machined Seals both sides. Self alignment during installation. Write for illustrated folder. The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR BALL BEARINGS
MOST COMPLETE LINE IN AMERICA

BREITT—Direct to IEN-6749

Almor Velometer

Gives instant, direct reading of Air Velocity —Anywhere!

Here's a precision built, self contained, portable instrument that gives instant, accurate reading of air velocities—everywhere, in plants, mines, or mills. Measures speed of flow through ducts, grilles, motors, furnaces, or in the open. Needs no calculations or reference charts. Anyone can use it and get accurate measurements. Available in a wide range of scales, and with a wide assortment of pitots and fittings if needed. You'll want full details and prices, so write for Bulletin No. 2448 G. Illinois Testing Laboratories, Inc., Room 517, 420 N. LaSalle Street, Chicago 10, Illinois.

Almor

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

BREITT—Direct to IEN-6750

STOP...!

FLOOR MAINTENANCE COSTS with EMERI-CRETE FLOORING

Vanishing maintenance costs and EMERI-CRETE FLOORING go hand in hand! Made only with diamond-hard CORTLAND EMERY AGGREGATE, cement and water—and easily laid by your maintenance department or accredited local contractors. EMERI-CRETE FLOORING actually improves with use—is practically indestructible and is ideal for new heavy-duty floors or re-surfacing old ones. In addition, non-skid EMERI-CRETE FLOORING helps speed movement of traffic, reduces wear and tear on equipment, and cuts accidents.

Write for our FREE Price-Free Folder No. 601. Read how plants in every industry are saving tons of maintenance for service. Use coupon, write, wire, phone.

Walter Maguire Co., Inc., Dept. IN-7
60 East 42nd St., New York 17, N. Y.
Name
Title
Company
Address
City Zone State

EMERI-CRETE FLOORING

BREITT—Direct to IEN-6751

CONVEYING . . Flexible spiral unit supports and drives hook type hangers

Source: TELEFLEX INC.
244 W. Wingohocking St., Philadelphia 40, Pa.

Rotating spiral [illegible]

The element will [illegible]

BREITT—Direct to IEN-6752

CIRCUIT BREAKER . . Panel assembly for lighting circuits fits 8 in. beam

Source: SQUARE D CO.
6058-62 Rivard St., Detroit 11, Mich.

Type NMO XX [illegible]

Constructions include single-phase, 2-wire and 3-phase, 4-wire circuits, 15, 20, 30, 40 and 50 amp. branches.

BREITT—Direct to IEN-6753

PATENTS . . How old is a patent answered by pocket folder from 1836 to date

[illegible]

Patent No. 2,500,000 is the last one listed in new 6-page pocket folder, "Telling the Age of A United States Patent". Dates are given as March 7, 1836. The folder lists 600 salient patent numbers and dates back to 1836. It also lists design (trademarks), and trade names to 1870.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Directories . . Ratings . . See Page 56

BREITT—Direct to IEN-6754

New Method Gives Precise Control in Air Conditioning

NIAGARA "Controlled Humidity Method" Uses HYGROL, Hygienic Liquid Absorbent

● This new method gives complete control of temperature and relative humidity, holding constant conditions, or varying them at the will of the user. Especially, it provides the use of normal atmospheric temperatures, definitely no refrigeration required.

The air is filtered and then enters a chamber where it passes thru a spray of "Hygrol" Liquid (a glycol hygroscopic chemical) that absorbs the air borne moisture and contains no salts or solids to precipitate. In the same chamber, cooling coils remove the latent heat of evaporation and the sensible heat as required.

The absorbent liquid spray falls into a tank at the base. It is piped to a concentrator, removing moisture taken from the air. The reconcentrated liquid returns to the system. This process is continuous and the apparatus operates always at full capacity.

This equipment is manufactured in units providing from 1000 to 20,000 C.F.M. of conditioned air.

Installations have been made in food and chemical process industries, in packaging hygienic products, for preventing condensation of moisture on metals and other products in storage, in air conditioning for labor-saving control and for human comfort.

For further information, write Niagara Blower Co., Dept. EN, 405 Lexington Ave., New York 17, N. Y.

BREITT—Direct to IEN-6755

STACKING TOTE BOXES . . .

Eliminate Shelving . . . Reduce Costs

Loaded Convoy Tote Boxes stack ceiling high without intermediate supports. They interlock securely to carry all weight on the reinforced wall and is used more often than floor and right.

DURABILITY [illegible] Moisture and fire resistant, they are impervious to moisture etc. They have required tests for rigidity and strong, comfortable hand holes.

MATERIAL [illegible] chemical impregnation process. Homogenous high tensil corrugated fibreboard into high hard and non-warping "CHEM-BOARD".

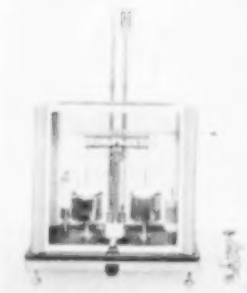
PRICE AND WEIGHT [illegible] 40% less than steel. No maintenance expense. It is economical to order them filled to your job. Weight averages under 4 pounds per cu. ft. of capacity.

Write for illustrated catalog and price list.

Standard and Custom-Made Nesting • Stacking • Vertical Tote Boxes for Quick Delivery

CONVOY, INC.
P. O. Station B, Box 2161
CANTON 6, OHIO

BREITT—Direct to IEN-6756



NEW

ARCCO-ANUBIS *Laboratory*

GAS BALANCE

SMALL SAMPLE—WIDE SPECIFIC GRAVITY RANGE

No manometer, vacuum pump, air drier or other complex accessories required

[illegible]

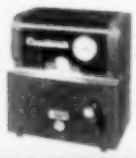
AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

SEND FOR CATALOG No. 101R
ARCCO-ANUBIS Gas Gravity Instruments

BREITT—Direct to IEN-6757

1000-E CARD-O-MATIC MODEL
Fully automatic, rings when time card is inserted.

1000-M MANUAL MODEL
Comes with registering lever attached.



YOU PAY FOR TIME... WHY NOT KEEP IT?

Safeguard your profits by installing a new, improved Cincinnati Job-Cost and Payroll Time Recorder. This wonder machine takes the guesswork out of recording payroll and job time—helps you avoid errors—assures you of a day's work for a day's pay.

Both models employ the exclusive CTR "Vis-A-Card" locator which insures correctly-positioned registrations, eliminates danger of "over-prints", speeds up line time.

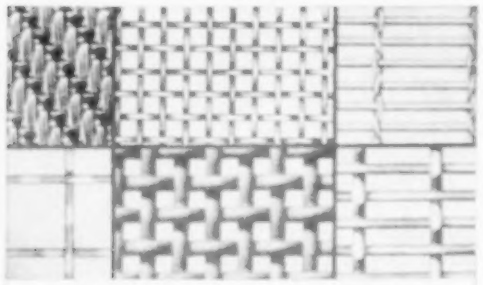
For full information, write Dept.

DISTRIBUTORSHIPS OPEN

[illegible]

THE CINCINNATI TIME RECORDER CO.
1733 CENTRAL AVE. • CINCINNATI 14, O.

▼ DIRECT—Identify by IEN-6758 ▼



INDUSTRY-WIDE SUPPLIERS OF

WIRE CLOTH

Industries of all types use Wissco and Calwico Wire Cloth for longer life and lower overall cost. Wide selection of weaves and meshes in all commonly used metals, to withstand abrasion, corrosion or high temperature. We are ideally equipped to handle large volume orders. Prices on request.

FREE BOOK ... profusely illustrated ... gives wire sizes, meshes and weights. In the East write Wickwire Spencer Steel; in the West, The California Wire Cloth Corp. Branches in principal cities.

WIRE CLOTH
WISSCO WICKWIRE SPENCER STEEL DIVISION CLINTON, MASSACHUSETTS
CALWICO THE CALIFORNIA WIRE CLOTH CORP. OAKLAND, CALIFORNIA
DIVISIONS OF THE COLORADO FUEL AND IRON CORPORATION, DENVER, COLORADO

▼ DIRECT—Identify by IEN-6759 ▼

CAPCO DOCK COVERS OFFER YEAR 'ROUND PROTECTION

Can be installed inside or outside of dock door ... models for various purposes.

SOLD AT A LOW COST

... and the cost is especially low because it pays for itself many times ... saves time and money over many years.

- PREVENTS ACCIDENTS
- ONE MAN CAN OPERATE
- FIREPROOF
- WATERPROOF
- DURABLE — LONG LIFE
- DEPENDABLE

BEAT THE BAD WEATHER

CAPCO Dock Covers completely enclose the space between car and building doorways, protecting loading and unloading during bad weather. Recommended by safety engineers. No more wet merchandise in the rain ... no more interruption during winter. Here's your insurance against loss of either heat or refrigeration, you have practically the same as indoor loading.

CAPCO

Be sure to write for illustrated literature and prices.

622-24 PROSPECT AVENUE • KANSAS CITY 1, MISSOURI

▼ DIRECT—Identify by IEN-6761 ▼

MOTOR CONTROL . . Magnetic contactor to 100 hp. on polyphase ac. to 600 volts

Source: WESTINGHOUSE ELECTRIC CORP. P. O. Box 2099-A, Pittsburgh 30, Pa.

NEMA Sizes 0 to 5 ... [illegible]

The assembly ... [illegible]

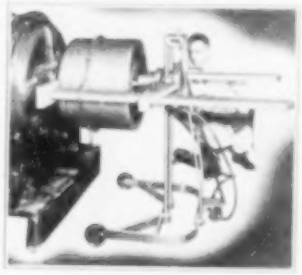
The operating element ... [illegible]

Bulletin 11-200, 8 pages, contains [illegible]

▼ DIRECT—Identify by IEN-6762 ▼

PULLING . . Hand hydraulic machine for gears, pulleys, has 50 ton rating

Source: INDUSTRIAL ENGINEERING EQUIPMENT CO. 120-26 E. 4th St., Davenport 2, Iowa



The hydraulic ram ... [illegible]

Application ... [illegible]

All Makers of Items And All Other Products Are Listed In THOMAS REGISTER ... Information ... Ratings ... See Page 58

▼ DIRECT—Identify by IEN-6763 ▼

CHIKSAN

HYDRAULIC SWIVEL JOINTS

This is but one of many different Types and Styles of CHIKSAN Hydraulic Swivel Joints for application on all hydraulic lines which must turn or swival. Pressure capacities range from 1000 psi. to 3000 psi. Write for Bulletin A. Or tell us your requirements and CHIKSAN Engineers will gladly cooperate with you in developing Hydraulic Swivel Joints to meet your requirements.

CHIKSAN COMPANY AND SUBSIDIARY COMPANIES
Chicago 3, Ill. BREA, CALIFORNIA Newark 2, N. J.
WELL EQUIPMENT MFG. CORP. HOUSTON 1, TEXAS
CHIKSAN EXPORT CO. BREA, CALIFORNIA NEWARK 2, N. J.

BALL-BEARING SWIVEL JOINTS FOR ALL PURPOSES

▼ DIRECT—Identify by IEN-6764 ▼

DO YOU KNOW?

—that a PILOT LIGHT CAN IMPROVE YOUR PRODUCT

. . . add attraction—safety—service?

Ask DIALCO

THIS MAY BE THE ONE

Designed for low cost NE 51 Neon
- Built-in Resistor
- Patented
- U.L. Listed
- Rugged

Catalogue Number 521309 — 997 for 110 or 220 volts

SAMPLES for design purpose NO CHARGE

NEW! Write for the HANDBOOK OF PILOT LIGHTS

Write us on your design problems.

Foremost Manufacturer of Pilot Lights

The DIAL LIGHT COMPANY of AMERICA

900 BROADWAY, NEW YORK 3, N. Y.

▼ DIRECT—Identify by IEN-6765 ▼

NEW, IMPROVED **NU-MATIC**

THE WHEEL WITH THE PNEUMATIC DRUM

With the Nu-Matic wheel the abrasive belt rides on a cushion of air contained in a rubber drum. Different pressures in the drum and different belt grits provide varied surface finishes. Deflate and belt can be changed easily and quickly for grinding, sanding or polishing. Cut your labor production and inventory costs with Nu-Matic grinding-unit Adapters for ¾"-11 or ⅞"-14 power equipment. (Specify size.)

Adaptable to bench, portable or flexible shaft power.

NU-MATIC GRINDERS, INC., 10304 W. McNICHOLS RD.
Detroit 21, Michigan UNiversity 3-2573

▼ DIRECT—Identify by IEN-6766 ▼

TRUSCON STEEL BOXES

just say *"Truscon..."*

and there's the *box* you need!

Truscon has a type of different types of steel boxes and skids to meet a wide range of materials handling requirements. And if your needs are something apart, Truscon has the engineering ability to tailor-make the exact units you require. Truscon's long experience in steel box and skid design ... Truscon's highly efficient facilities for production and service ... Truscon's long association with box users in every branch of materials handling ... these are the features that make every dollar investment in Truscon Steel Boxes and Skids so much more profitable. Write for catalog.

TRUSCON STEEL COMPANY
YOUNGSTOWN, OHIO
SUBSIDIARY OF REPUBLIC STEEL CORPORATION

▼ BREITT—Identify by IEN-6767 if you write the maker ▼

STURTEVANT
Laboratory Machines
Assure Quality of Products
Fast-Economical-Accurate

Sturtevant Laboratory Equipment makes laboratory work. They are fast and accurate, available non-contact. Rugged and dependable. Sturtevant equipment actually has all the features of full size machines plus extra control and easy reset of adjustments. The "Open Door" accessibility permits quick, thorough cleaning — prevents the possibility of precision factors from contaminating new samples.
Investigate Sturtevant equipment for your laboratory. Write for complete details and catalog.

STURTEVANT MILL COMPANY
112 CLAYTON STREET, BOSTON 22, MASS.

▼ BREITT—Identify by IEN-6768 if you write the maker ▼

Now...

Bigger

TO SERVE INDUSTRY **BETTER!**

Today, Aetna is better than ever before in its history. It is the result of years of research and experience in the production of precision ball and roller bearings. Aetna's engineers are ready to help you with your bearing problems. Aetna's production facilities are ready to produce your requirements in quantity, to your specifications, with the high degree of precision and quality for which Aetna is known.

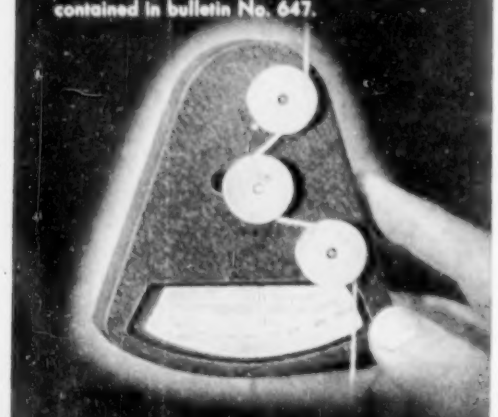
AETNA BALL AND ROLLER BEARING COMPANY
5600 Schubert Ave. • Chicago 39, Illinois

Aetna

Standard and Special Ball Thrust Bearings • Angular Contact Ball Bearings • Special Roller Bearings • Ball Retainers • Hardened and Ground Washers • Cages • Bearings

▼ BREITT—Identify by IEN-6769 if you write the maker ▼

Boulin Tensiometers measure yarn, cord, filament and fine wire Tensions in winding and coiling operations. Their use insures uniformity and prevents overstretching and breaking of strands. Made in 12 standard ranges from 0 to 10 grams and up to 2 to 20 lbs. Full information contained in bulletin No. 647.



BOULIN INSTRUMENT CORPORATION
PORTABLE AND STATIONARY CENTRIFUGAL TACHOMETERS
PORTABLE CHRONOMETRIC AND STROBOSCOPIC TACHOMETERS
65 MADISON AVENUE, NEW YORK 16, N. Y.

▼ BREITT—Identify by IEN-6770 if you write the maker ▼

WOOD WORKING . . Three lip cutter mounts on 1/2-in. shaper spindle

Source: ROCKWELL POWER TOOL DIV.
602 E. Vienna Ave., Milwaukee 1, Wis.

The company [illegible]

▼ BREITT—Identify by IEN-6771 if you write the maker ▼

HOSE . . General purpose design, air, oil, gasoline, hot or cold water

Source: HEWITT RUBBER DIV.
238-42 Kensington Ave., Buffalo 5, N. Y.

Overall [illegible]

One hose for most all uses [illegible]

▼ BREITT—Identify by IEN-6772 if you write the maker ▼

FEEDING . . Belt conveyor takes materials from hopper at set rate

Source: RICHARDSON SCALE CO.
666-700 Van Houten Ave., Clifton, N. J.

Belt Feeder Type [illegible] is a new motor driven belt conveyor in a rectangular housing and fitted with an inner hopper and accessible gate to use a special size of materials. Good uses: Flat belt. Installation is made under a supply hopper so as the delivery end of weighing equipment so as the feed end of equipment to which a measured and precise flow is required.

Eight sizes measure 18 to 60 in. between pulley centers and from 24 to 90 in. in overall housing length. Housing width is 10 inches. Widths of the delivery section is from [illegible] Capacities are to 1,000 cu. ft. Belt speed can be specified on a variable speed motor is available.

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 50

▼ BREITT—Identify by IEN-6773 if you write the maker ▼

NEW FAULTLESS

ENGINEERED
TRUCK CASTERS
CUT HANDLING COSTS

Good-looking production aids are Faultless Casters — produces smoother, quieter, easier handling with less manpower and effort. It's more practical solution to cutting handling costs.

Regardless of what you handle or make there is a Faultless Caster especially suited to your job. Wheel diameters range from [illegible] to [illegible] and capacities from [illegible] to [illegible] per caster.

Write for Bulletin [illegible]

FAULTLESS CASTER CORP.
Dept. IE-2, Evansville 7, Indiana
Branches in Principal Cities—Canada Factory: Stratford, Ont.

▼ BREITT—Identify by IEN-6774 if you write the maker ▼

NO MORE hacksawing drudgery that everybody hates.

NOW!

HAND-I-HACK

*Trade Mark Reg. U. S. Pat. Off.

PORTABLE POWER HACK SAW

Hand-I-Hack will eliminate this drudgery. It's light—easily carried to the job. It will work in any position. It will pay for itself quickly in labor saving and broken blade costs alone. Capacity 3" x 3". Write for literature.

Lipe-ROLLWAY CORPORATION
812 Emerson Ave. Syracuse, N. Y.

▼ BREITT—Identify by IEN-6775 if you write the maker ▼

UP TO **70%** FASTER PRODUCTION

AT SAME DRAWING SPEED

Clearing HiProDraw Cycles in 5 Seconds

Conventional press requires 8½ seconds

This mechanical, double-acting press provides fast approach and return combined with reduced speed during actual draw. It will deliver up to 70% more pieces per hour without drawing any faster than an ordinary double-action press. Write for full details about the new

CLEARING
HiProDraw

CLEARING MACHINE CORPORATION
6499 WEST 65TH STREET • CHICAGO 38, ILLINOIS

▼ DIRECT—Indicate by IEN-6777 if you write the maker ▼

it's paper

BUT IT MAKES A CAFETERIA TRAY IMPERVIOUS TO HEAT AND LIQUIDS

This highly technical paper is delivered already impregnated, with special resins to customers who laminate and form it under heat and pressure.

"Riegel's 1-70" is a paper so highly specialized that only a few companies can use it, but it is only one of more than 600 Riegel papers, many with technical properties that would surprise you.

Perhaps one of these 600 Riegel papers can help you. If not, we can probably create a new paper — "tailor-made" to your most exacting requirements. And tell us what you are looking for, to avoid us a sample. If we don't make it, we will gladly tell you who can.

RIEGEL PAPER CORPORATION • 342 Madison Avenue, New York 17, N. Y.

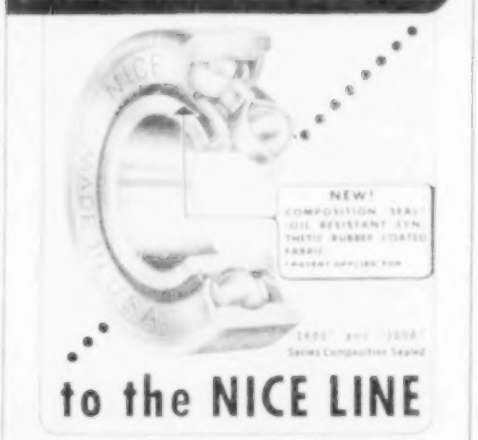
Riegel

• TAILOR-MADE PAPERS FOR INDUSTRIAL USE •

▼ DIRECT—Indicate by IEN-6778 if you write the maker ▼

for the PRODUCT DESIGNER . . .

an IMPORTANT NEW ADDITION



to the NICE LINE

Available as Illustrated, Series "1600" Low Cost Precision Radial Bearings and Series "3000" Ground "Precision Type" Radials with COMPOSITION SEALS. Also Available Metal Shielded or Open.

Write for New Catalog No. 140

NICE BALL BEARING COMPANY
NICETOWN PHILADELPHIA PENNSYLVANIA

▼ DIRECT—Indicate by IEN-6779 if you write the maker ▼

Heavy-Duty ELECTRIC HAMMER with NO KICK!

New "Cushion Snap" Action Gives Light Weight, Easy-to-Use, Low-Cost Hammer with TERRIFIC WALLOP!

The Noble & Stanton "Super Slugger" hits as hard and fast as heavy electric hammers — yet weighs only 7½ pounds — has no kick — and costs much less. It's entirely new, thoroughly tested "Cushion Snap" principle eliminates kick, direct vibration and operator fatigue. Plug in this heavy-duty hammer anywhere — use it on concrete or sheet metal, for stripping flooring — on ladders or scaffolds — with one hand — and all you feel is the motor running! The simplicity of the low-cost "Super Slugger" makes it easy and economical to maintain. Try it today — or write for full information.

DISTRIBUTORS: A few territories are still available.

Our Distributor Will Demonstrate or Write for Bulletins and Prices

NOBLE & STANTON, INC.
1008 BROADWAY • BEDFORD, OHIO

▼ DIRECT—Indicate by IEN-6780 if you write the maker ▼

GAGE . . Dial indicator assembly for internal grooves from ½ to 6 in.

Source: RIMAT MACHINE TOOL CO.
1115-19 Air Way, Glendale 1, Calif.

Dial Bore is a new internal gage consisting of a pair of actuating fingers and a standard dial indicator to check diameters of grooves for place of varying sizes. The gage is available in most actual diameters in increments of two inches by 0.005 in. up to head the gage capacity. The gage is interchangeable on a set diameter.

Tip diameters are ½ or ¾ in.; Special tips can be ordered for grooves as narrow as .062 inch. Various mounts regardless are available to match other bores with diameter limited only the tip or footing of the bore are here.

▼ DIRECT—Indicate by IEN-6781 if you write the maker ▼

DRYING . . Cycling dehumidifier 25 and 50 cfm. on 100 lb. at 70 deg. F.

Source: INDUSTROL CORP.
88-37 76th Ave., Brooklyn 27, N. Y.

Duplicate [illegible]

Model [illegible] [illegible]

▼ DIRECT—Indicate by IEN-6782 if you write the maker ▼

SEALING . . Catalog on O-rings shows how they deform to seal under pressure

[illegible]

Sequence diagrams [illegible]

All Makers of These And All Other Products Are Listed In THOMAS REGISTER — Descriptions — Ratings — See Page 16

▼ DIRECT—Indicate by IEN-6783 if you write the maker ▼

THIS IS IT!

World-wide recognition for this outstanding line of electric soldering irons —

HEXACON

— specified by the big names for the *TOUGH JOBS!*

WESTERN ELECTRIC
MINNEAPOLIS HONEYWELL
RADIO CORP. OF AMERICA
WESTINGHOUSE
STROMBERG CARLSON
EMERSON
KAISER
SPERRY
BENDIX
etc.

PLUS 16 SCREW TIPS 40 to 100 Watts ⅛" to 1¼" Tip Dia.

Follow the leaders and specify HEXACON "Heavy" efficiency, time saving soldering problems. Write for literature.

Here's the famous HATCHET TYPE

[illegible]

HEXACON ELECTRIC CO.
151 W. CLAY AVE. ROSELLE PARK, NEW JERSEY

▼ DIRECT—Indicate by IEN-6784 if you write the maker ▼

HILCO for Lubricating, Fuel and Industrial Oil Purifying . . To save oil, equipment and money

There is a HILCO unit available for every type of oil purifying problem.

Air compressors
Aircraft engines
Aluminum rolling mills
Auto shops
Boats, Tugs, Tankers
Construction
Diesel engines
Electric Generators
Engine rooms
Fleets
Gasoline engines
Heat treating
Hydraulic presses
Locomotives — Diesel
Machine tool rolling oil
Power units
Quenching
Refineries
Steam engines and turbines
Steel rolling mills
Vacuum pumps
Wire drawing machines

When oil is used it becomes contaminated and a HILCO will clean it. Tell us about your oil purification problem. FREE literature will show you how to solve them.

THE HILLIARD CORPORATION
35 WEST FOURTH ST., ELMIRA, N. Y.

Offices in Principal Cities — In Canada: UPTON-BRADEEN (1951) LTD. 200 Bay Street, New York Bldg., Montreal

▼ DIRECT—Indicate by IEN-6785 if you write the maker ▼

WOW! These Cold-Forged casters really save money!

[illegible]

The RAPIDS-STANDARD COMPANY, Inc.
312 Rapistan Building
Grand Rapids, Mich.

Rapistan®
CASTERS AND TRUCKS

CASTERS, HAND AND POWER TRUCKS, CONVEYORS, BELT CONVEYORS, Power Units, Conditioning Systems

▼ DIRECT—Indicate by IEN-6786 if you write the maker ▼

Protect equipment against wear, corrosion, acids with RUBEROID RAPID ASPHALT PAINT

Check these advantages for durable, economical protection of surfaces exposed to wear, weather and chemical attack:

1. High resistance to acid and alkali.
2. Excellent electrical insulating qualities.
3. Withstands temperatures up to 212°F.
4. Prevents corrosion, rust, rust.
5. Highly penetrant — preserves wood.
6. Tasteless — odorless when dry.

The RUBEROID Co. Executive Offices: 500 Fifth Ave., N. Y. 18, N. Y.

MANUFACTURERS OF BUILDING MATERIALS

▼ DIRECT—Identify by IEN-6787 if you write the maker ▼

HANDLE Coils

Strip and Grip

THE EASIEST AND CHEAPEST WAY

SABIN COIL TRUCK

Built especially for handling coils, tires, wheels or anything with a hole through it.

As truck is moved up to coils or other articles, the arm passes through hole, then an easy pull back on handle picks up load.

Follower wheel minimizes trucking effort.

WRITE FOR BULLETIN

THE SABIN MACHINE CO.
6540 Carnegie Avenue
Cleveland 3, Ohio

THE SABIN LINE OF ONE-MAN TRUCKS *includes*

KEG TRUCKS • PACKING TRUCKS • BOX TRUCKS • BARREL TRUCKS • DRUM TRUCKS • SHOP TRUCKS • TOTE PAN TRUCKS • SPECIAL TRUCKS

▼ DIRECT—Identify by IEN-6788 if you write the maker ▼

employee heating comfort is measured "by the FOOT."

For comfort, use the heater the knees is worth 100 above the head. That's why it's wise to stand up.

DRAVO *Energy* HEATERS

Floor clothe Equipped, each unit flankets from 4,000 to 20,000 square feet with warm air at the working level, reducing roof heat loss, saving fuel dollars. At these 150-250 feet no fan is needed for open areas. Users report fuel cost 50 to 60% less than unit type systems. Oil or gas fuel, easily converted. 80-85% efficiency. Quiet forced ventilating air in minutes. Immediate deliveries, easy installation. Ask for Bulletin EK 523-92

DRAVO CORPORATION
DRAVO BUILDING, PITTSBURGH 22, PA.

Sales Representatives in Principal Cities
Sold and Sold in Canada by Marion Industries, Ltd., Great Quebec

▼ DIRECT—Identify by IEN-6789 if you write the maker ▼

Remove SCALE, PAINT, RUST Quickly . . . Easily

USE AURAND CLEANING TOOLS

It's easy to remove paint, scale, rust and other accumulations with AURAND Cleaning Tools. Powered rotary chipping does a thorough cleaning job in less time. No special skill required. Even depth surface is ensured by an adjustable shoe control. Cutter heads are renewable.

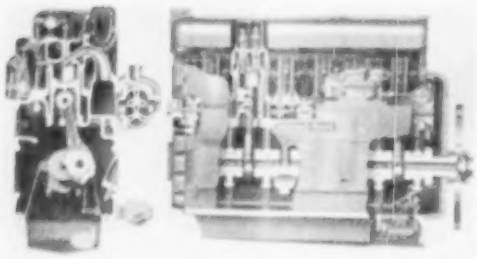
For further information, address Dept. 649

AURAND MFG. & EQUIP. CO.
2043 Colerain Avenue • CINCINNATI, OHIO

▼ DIRECT—Identify by IEN-6790 if you write the maker ▼

ENGINE . . Four cycle diesel rates 285 and 375 hp. at 1,000 rpm.

Source: INGERSOLL-RAND CO.
746 Morris Ave., Phillipsburg, N. J.



Type TS [illegible]

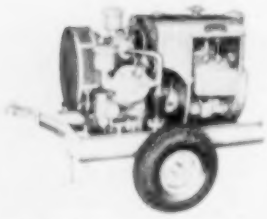
Construction [illegible]

Gear drive is provided for the camshaft, blower, water and lubricant pump from the flywheel end to provide for power takeoff at rocker end. Fuel is injected through individual injection pumps. There are two spare hole nozzle injection nozzles at each cylinder. A mechanical supercharger supplies air for combustion and is integral [illegible] the exhaust stroke.

▼ DIRECT—Identify by IEN-6791 if you write the maker ▼

COMPRESSOR . . Engine drive assembly, wheel mounted, 60 cfm. to 100 pounds

Source: DAVEY COMPRESSOR CO.
264-68 N. Water St., Kent, Ohio



Model 60 WHD is a new assembly of the company's [illegible] air-cooled compressor, a [illegible] air-cooled gasoline engine and a two-wheel mounting truck to which the tubular frame serves as the axle [illegible]. The wheels are equipped with pneumatic tires. A tow bar permits truck hitching.

The compressor engines [illegible] are guaranteed not to [illegible] carbon, treated piston mainly lubricant at both the compressor and the engine. A timer is available [illegible] to set for pressure to 100 pounds.

All Makes of These And All Other Products Are Listed In THOMAS' REGISTER Descriptions Ratings — See Page 20

▼ DIRECT—Identify by IEN-6792 if you write the maker ▼

Announcing A New LOW COST Ball Bearing for Non

LINEAR MOTIONS

THE COMMERCIAL GRADE SERIES B

BALL BUSHING

Sliding linear motions are nearly always troublesome. Thousands of progressive engineers have solved this problem by application of the Precision Series A Ball Bushing.

The low-cost Commercial Grade Series B bearing is now added to the Ball Bushing line and, offered to original equipment manufacturers. This ball bearing has been developed for support of linear motions in competitively priced, volume produced products where super precision is not essential. Alert designers can now make tremendous improvements in their products by using Ball Bushings on guide rods, reciprocating shafts, push-pull actions, or for support of any mechanism that is moved or shifted in a straight line.

Competition is returning. Up-to-date engineering can be important to you!

NEW IS NOW AVAILABLE

LOW FRICTION • ELIMINATE BINDING AND CHATTER • SOLVES SLIDING LUBRICATION PROBLEMS • LASTING ALIGNMENT • LOW MAINTENANCE • LONG LIFE

THOMSON INDUSTRIES, INC. MANHASSET, NEW YORK

PROGRESSIVE MANUFACTURERS USE BALL BUSHINGS—A MORE IMPROVEMENT AT A HIGHER COST

▼ DIRECT—Identify by IEN-6793 if you write the maker ▼

"NATIONAL"

SELF LUBRICATING BRONZE BEARINGS

Molded to Your Accurate Specifications

Our "DUCTILOY" bearings are made from a unique powder formula perfected by National Engineers that result in a bearing with properties possessed by no other bearing on the market. Our special alloy makes these bearings highly durable and eliminates waste due to breakage at installation or from rough handling.

We are also very proud of our line of spherical bearings and of our hard won reputation for the delivery of intricate powdered metal parts, heretofore considered impossible to produce.

Applicable to all medium and light weight motors, such as Automatic Electrical Appliances, Farm Equipment, Domestic Appliances, such as Sweepers, Refrigerators, Washers, Portable Electric Tools, etc. and Industrial Machinery.

LET US HELP SOLVE YOUR BEARING, BUSHING AND SHAFT SEALING PROBLEMS

We are equipped to handle your requirements of any quantity

NATIONAL MOLDED PRODUCTS, INC.
Manufacturers of
Sintroy, Ductiloy and Tubeloy Bearings
1945-MILL STREET • ST. MARYS, PA.

▼ DIRECT—Identify by IEN-6794 if you write the maker ▼

GET THE FACTS NOW!

Potter

HIGH SPEED ELECTRONIC

PREDETERMINED COUNTERS

For these applications:
AUTOMATIC MACHINE CONTROL
PACKAGING BY PREDETERMINED COUNT
LINEAL MEASUREMENTS
FREQUENCY MEASUREMENTS
TIME INTERVAL CONTROL

The ONLY counter with ALL these features!

- COUNTS AT RATES UP TO 60,000 PER MINUTE
- ABSOLUTE ACCURACY
- INSTANTANEOUS AUTOMATIC RESET
- NO MOVING PARTS, FRICTION OR INERTIA
- SIMPLE DIAL SELECTION OF COUNT

Potter Predetermined Electronic Counters extend the field of automatic counting and control far beyond the scope and capabilities of existing mechanical and electromechanical devices. There are no moving parts — therefore, wear, slippage and inertial effects are eliminated.

Although the standard models count at rates up to 60,000 per minute, counters capable of counting at higher rates are available.

A complete line of photoelectric and electromagnetic detectors for counting any material or action can be supplied.

The instruments are easily applied to any problem requiring the precise measurement or control of QUANTITY, LENGTH, TIME, FREQUENCY, REVOLUTION or CAM SEQUENCE. Absolute accuracy of count is guaranteed.

Write today for an accurate assessment of your counting or control problem. Fill out the handy coupon.

POTTER INSTRUMENT CO.
INCORPORATED
200 CUTTER MILL RD., GREAT NECK, N. Y.

Gentlemen:
I am interested in the units checked. Please send complete information at once.

NAME
COMPANY
STREET
CITY ZONE STATE

☐ COUNTING ☐ MACHINE CONTROL
☐ PACKAGING ☐ TIMING
☐ SORTING ☐ PROCESS CONTROL
☐ BATCHING ☐ FREQUENCY MEASUREMENT

▼ BREITT—Identify by IEN-6796 if you write the maker ▼

FABRICATIONS and FITTINGS
Accurately Built to Your Specifications

Shown here are fabrications typical of the service provided by Naylor customers. Special fittings, manifolds, ducts and other equipment from single units to the most complicated layouts can be precision built to meet your most rigid requirements.

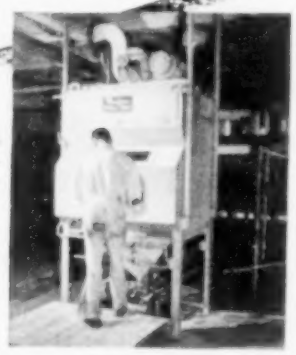
Write for details or send specifications for quotation.

NAYLOR PIPE COMPANY
1235 East 92nd Street, Chicago 19, Illinois
New York Office: 350 Madison Avenue, New York 17, N. Y.

▼ BREITT—Identify by IEN-6797 if you write the maker ▼

At Fred Heinzelman & Sons
NEW YORK, N.Y.

Pangborn Hydro-Finish CUTS HAND POLISHING OF DIES 60%
reports Mr. J. L. Crosby, General Manager



Shown here is the Pangborn Hydro-Finish unit which cut dies costs at Fred Heinzelman & Sons. A pioneer of hand finishing, the company reports Hydro-Finish removes hand finish easily, distortion, cold hand peening 60% to 75% and hardly measurable to a precise 1000".

Find out how HYDRO-FINISH *can save you money*

Hydro-Finish is the answer to modern cleaning, descaling and finishing problems. As Fred Heinzelman & Sons have found, Hydro-Finish virtually eliminates tedious and expensive hand buffing and polishing in less time and for accuracy.

And on the production line, Hydro-Finish assures better looking electroplating, painting — gives you the surface you want within .0001" with its patented "no hard to reach" superfinishing for after cleaning.

For full information on the money saving Hydro-Finish can save you money, write today for Bulletin 1400 to Pangborn Corporation, 1200 Pangborn Blvd., Hagerstown, Maryland.

Pangborn
BLAST CLEANS CHEAPER
with the right equipment for every job

▼ BREITT—Identify by IEN-6799 if you write the maker ▼

GAGE . . Adjustable work stop for positioning at shear, saw, cutter

Source: STANDARD IRON & WIRE WORKS INC.
2928-32 N. Second St., Minneapolis 11, Minn.

Mule Gage is a tool or fixture for clamping on an operator's table with a 12½ or 2 in. flange and close to position, along the tool for repeated work cutoff lengths or shearing or sawing. The tool has a spring-loaded plate that directs stock if work stock curves in. The gage will return the stock to initial position.

It also will take the one-time cost for a sheet cut and will indicate to operator position when the cut has been completed. An accessory to the tool permits positioning the gage from a remote location using cord connection. List price of the tool assembly is $74.50.

▼ BREITT—Identify by IEN-6800 if you write the maker ▼

PAINT . . Air drying aluminum for hot metals at 500 to 1,200 deg. F.

Source: THOMPSON & CO.
1018 Edward St., Oakmont, Pa.

For furnaces
process units
stacks, tubes

Tersotol is a new air-drying aluminum paint for surface protection of metals subject to temperatures to 1,200 deg. F. Fast spread and tack-dry retardants are excluded. Application is by brushing, dipping, spraying. No primer is required. The coated dries in 12 to 16 hours. It can be baked dry in 15 min. at 500 deg. F. It meets the requirements of commercial specifications.

▼ BREITT—Identify by IEN-6801 if you write the maker ▼

TESTING . . Electric meter reads storage battery cell condition

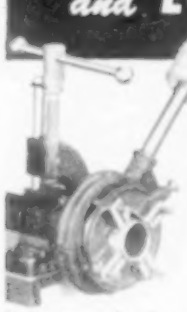
Source: GENERAL SCIENTIFIC EQUIPMENT CO.
2785 W. Huntingdon St., Philadelphia 32, Pa.

Its Rale Valve No. 21 consists of an electric motor, a loaded snap or chronometer the motor drives and an adjustable pool mercury with which to make contact across the terminals of any 6-volt storage battery cell. The motor that is decided to read is seen detecting "dead," "discharged" and "charged." The time comes up when a cell is dead, quite quick when it is not, and charged. List price is $10.50.

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 38

▼ BREITT—Identify by IEN-6802 if you write the maker ▼

TOPS THEM ALL FOR LIGHT WEIGHT *and* LOW COST!



TOLEDO No. 1R THREADER
1" to 2" Pipe

Here's a great tool at a bargain price! Toledo 1R is the *lightest weight* 1" to 2" threader—weighs only 17 lb. "as put on the pipe." Die change quick and easy—so, many reduce costs by using separate tool for each size! Each set of dies hobbed for proper clearance . . . easier cutting, smoother, cleaner threads and tighter pipe joints! Write for bulletin No. 650 and price. The Toledo Pipe Threading Machine Co., Toledo, O.

TOLEDO
FOR PRECISION PIPE TOOLS

▼ BREITT—Identify by IEN-6803 if you write the maker ▼

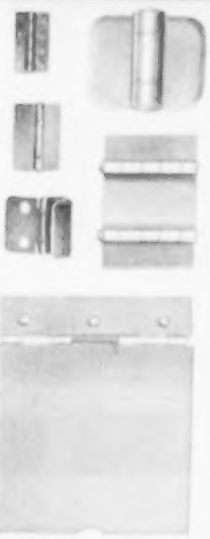
Cramer

WHERE **TIME** IS A FACTOR OF **CONTROL** IN INDUSTRY

THE R. W. CRAMER COMPANY, INC.
BOX 16, CENTERBROOK • CONNECTICUT

▼ BREITT—Identify by IEN-6804 if you write the maker ▼

Why it pays to have STANLEY make YOUR SPECIAL HINGES



● As the market begins expansion of hinge division's general for top efficient production. You remain special hinging into the unit. Then this detail is be-called product.

Whether you need hinges in quantity production, you have the advantage of expert attention by Stanley engineers and production engineers . . . the use of Stanley, patented and outstanding facilities . . . and the choice of the precision plating or finish best suited for your product. Because Stanley is in a position to supply all types, Write today for catalog . . . and data for special hinges for big time savings and cleaning up jobs.

THE STANLEY WORKS
PRESSED METAL DIVISION
New Britain, Conn.
New York — San Francisco
Chicago — Los Angeles
Detroit — Seattle

STANLEY

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

▼ BREITT—Identify by IEN-6805 if you write the maker ▼

Roper "K" Pumps

MEASURE UP TO THE UL CHECK LIST

✓	Compact Design
✓	Reliability
✓	Durability
✓	Ease of Installation
✓	Freedom from Repair or Adjustment

Sizes ¾, 1½, 3, 5 G.P.M. Series K Pumps Tested and Approved for **OIL BURNER SERVICE**

Roper Series K Pumps meet the standards set by the Underwriters Laboratories, Inc., and then some! Suitable for all burner service, they are available in either packed lubricated or mechanical seal designs—with or without relief valve. The ¾, 1½ and 3 G.P.M. sizes are flange mounted . . . 5 G.P.M. size is foot mounted. Get *all* the facts on Roper Series K Pumps . . . write today!

ROPER *Rotary Pumps*

GEO. D. ROPER CORP.
207 Blackhawk Park Ave.
ROCKFORD, ILLINOIS

IEN - 6806

IEN - 6807

In Any Location— A Quiet Spot for Telephoning

The modern, doorless Burgess-Manning Acoustic Booth provides a quiet spot for telephoning . . . in noisy locations anywhere. Thick walls of sound-absorbent material soak up noise. Conversations are clearer . . . private.

ALSO
- Banks
- Bus Terminals
- Railroad Stations
- Utility Plants

MAIL COUPON FOR FREE BULLETIN BURGESS-MANNING COMPANY
743-A East Park Ave. Libertyville, Illinois

Please send booklet describing Burgess-Manning Acoustic Booths

Name: Firm Name:

Street: City:

IEN - 6808

CUT SPRAY PAINTING COSTS

SPEED UP PRODUCTION

ELECTRO-FORMED METAL MASKS

SEND COUPON TODAY

CONFORMING MATRIX CORPORATION
330 Toledo Factories Building Toledo 2, Ohio

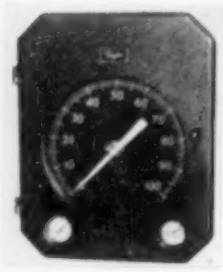
I am interested in metal masking shields. Please send without obligation: ☐ Further information ☐ Quotations on masks for parts (or prints) which I am forwarding.

NAME
FIRM
ADDR
CITY
STATE

IEN - 6809

GAGE . . Pneumatic indicator to read low pressures, also to control

Source: TAYLOR INSTRUMENT COS.
59 Ames St., Rochester 1, N. Y.



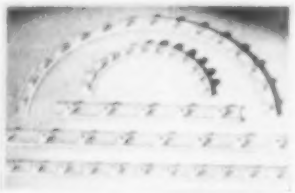
Concentric dial characteristic of the new indicator and in the company's line of pneumatic low-range recording and control equipment. The dial is made of two plates of which one carries the graduations, is stationary and has several openings normally covered by a second outer dial carrying the pointer. This second dial can be rotated so one V shaped opening will coincide with the opening in the stationary dial for access to the mechanism.

Numerals on the dial are white on a black background and measure ⅛ in. in height. The pointer also is white. A reading can be made at a distance of 50 to 100 feet. Three types of action can be specified. These include mercury manometer or differential pressure, floating diaphragm, low pressure bellows for pressure readings and the bellows for absolute pressure. Standard ranges for 1 to 10 on a square-root scale and 0 to 100 or 0 to 200 on a uniform scale.

IEN - 6810

FASTENING . . Channel strip assembly, specified nut sizes, lengths, shapes

Source: ELASTIC STOP NUT CORP.
2328-32 Vauxhall Road, Union, N. J.



New channel strip is made of galvanized steel, 1 in. wide and 1 in. deep. Designed to receive the channel is one nut in which the locking mechanism is the locking nut. The strip grips the nut firmly by the locking action of the locking nut. The nut can be used and reused if installed on more than locking nut.

The strip is available in specified lengths to specifications, or in lengths of stock for power threading, cutting that must be repeatedly removed and replaced. A feature of the locking nut is that it can be used without damage.

IEN - 6811

PLATINUM . . Useful suggestions on care and application of platinum ware

Johnson & Co.
Chemical Division, Rose Magnolia Bldg.

What to watch for in handling platinum laboratory ware is given in the form of suggestions and recommendations in new 8-page bulletin. This is "Notes on the Care and Use of Platinum Crucibles and Dishes". Specific harmful materials are noted with precautions necessary to check use.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 10

IEN - 6812

Save TIME! Save SPACE! HANDLING SHEET METAL PARTS!

Handle parts and materials faster and safer than with Donaldson's versatile TIER TRUCK. SINGLE-HANDED, one man can move them from raised storage to any place, quickly, conveniently, safe. Electric lockers — stock made and loaded in one operation. Portable boards, crates, frames. Expanded metal racks, provide clear view of contents. Two wind and one revolving cover for maneuverability.

WRITE FOR LITERATURE

DONALDSON COMPANY Inc.
666 Fulham Blvd. St. Paul 4, Minnesota

IEN - 6813

THE DECISION OF A LIFETIME

It is literally true that the decision to install Neff & Fry Storage Bins is a lifetime decision, for these Super-Concrete Stave structures can be expected to last beyond the ruling generation.

Many of the N & F Bins erected 30 years ago are now serving the sons of the purchasers. This longevity is due to the performance of the Super-Concrete Staves. The staves are formed under hydraulic pressure, giving them rocklike density and high compressive strength. They do not rust, rot or burn. They form walls so rugged that heavy machinery is mounted upon them without additional supports. N & F Bins have given unbroken service for decades, which demonstrated adjacent buildings and uprooted nearby trees.

If you have flowable bulk materials to handle and store, get all the facts about N & F Bins. Our catalog, containing numerous photographs of installations, is yours for the asking.

The NEFF & FRY Company
East Central Avenue, Camden, Ohio

NEFF & FRY STORAGE BINS

IEN - 6814

FREE! and IMPORTANT

Write for your FREE copy of this informative, well illustrated brochure that points up the many uses and advantages of

Clearsite PLASTIC SELLING CONTAINERS

for the packaging of drills and tools, industrial jewels, taps and dies, screws, springs, nozzles, valves, fine machine parts, fishing tackle, electrical parts, and many, many others.

Clearsite is: *Permanently Printed • Flexible or Rigid • Shatterproof • Featherlight (⅙ the weight of glass) • Clear or Opaque in All Colors.*

Clearsite is made only by

CELLUPLASTIC CORPORATION
32 AVENUE L • NEWARK 5, N. J.

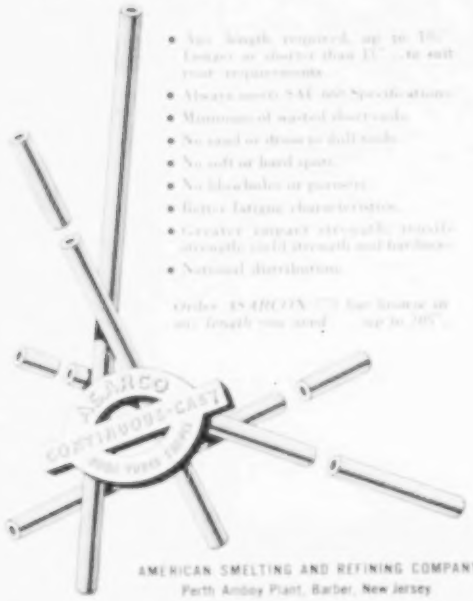
America's #1 Source For Plastic Containers—Established 1919

Milwaukee • Los Angeles • Detroit • New Haven • Cleveland • Denver • Minneapolis • Cincinnati • Atlanta • Houston • Chicago • Jacksonville • Ft. Worth • St. Louis • San Francisco • Jackson • Richmond • Montreal • Toronto.

▼ BREEZITY—Identify by IEN-6816 if you write the maker ▼

Asarcon 773 BEARING BRONZE

...IN ANY LENGTH YOU NEED



- Any length required, up to 10½' Longer or shorter than 12' ...to suit your requirements.
- Always meets SAE 660 Specifications
- Minimum of wasted short ends
- No sand or dross in drill ends
- No soft or hard spots
- No blowholes or porosity
- Better fatigue characteristics
- Greater impact strength, tensile strength, yield strength and hardness
- National distribution

Order ASARCO 773 bar bronze in any length you need ... up to 10½'.

AMERICAN SMELTING AND REFINING COMPANY
Perth Amboy Plant, Barber, New Jersey

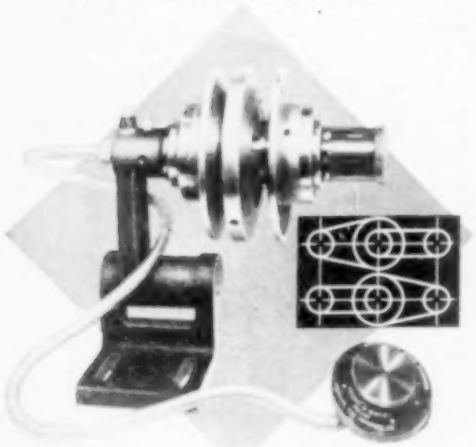
▼ BREEZITY—Identify by IEN-6817 if you write the maker ▼

new!

ADJUST-O-MATIC

Variable Speed Pulleys

Give Infinitely Variable Speed Ratio
Maintain Setting Indefinitely
Can Be Used in Any Position



INFINITELY VARIABLE — Adjust-O-Matic Pulleys provide infinitely variable speed, step up or step down, with a simple turn of the knob.

REMOTE CONTROL — Adjust-O-Matic Pulleys can be supplied with remote control (shown), or with integral dial and knob on hub.

2 SPEED RATIOS — Adjust-O-Matic Pulleys are made in 2-to-1 or 3-to-1 maximum ratio, depending on power transmitted.

To Increase Performance

Design Adjust-O-Matics into your new machines
Install Adjust-O-Matics on your present equipment

See for yourself how simple Adjust-O-Matic pulleys are to install in this folder today!

AMERICAN TYPE FOUNDERS ATF
200 Emmet Avenue, Elizabeth 5, New Jersey

▼ BREEZITY—Identify by IEN-6819 if you write the maker ▼

COMMUNICATING . . Two way radio for police and commercial vehicles

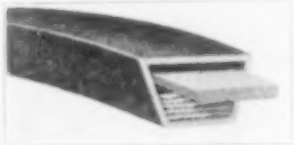
Source: GENERAL ELECTRIC CO.
1949 Electronics Park, Syracuse 1, N. Y.

Type ES-12 A is a new 10-watt mobile radio transmitter-receiver for police-related operations. It is based on the company's "Delta-Designed" approach. Its low, 10-watt-rated transformer for noise-free, peak audio output of 4 watts adjustable IF gain control, built-in squelch and power supply are included in one cabinet. Weight is 36 pounds. Complete mobile equipment is supplied as shown in the illustration.

▼ BREEZITY—Identify by IEN-6820 if you write the maker ▼

DRIVE . . Reinforced V-belt, synthetic cords in rubber-fabric body

Source: GOODYEAR TIRE & RUBBER CO.
1142-46 E. Market St., Akron 16, Ohio



DYT is a new V-belt in which synthetic cords are secured over the body to add to the load carrying strength of the rubber-fabric belt. The belt is available in A to E sections and in machine-made matched sets of length tolerance. Prices are 20 to 40% below comparable rubber-cord belts. Complete specifications in the DYT Data Sheet, 20-K-1, 20-K-2.

▼ BREEZITY—Identify by IEN-6821 if you write the maker ▼

CONVEYING . . Horizontal section for delivery from incline belt conveyor

Source: RAPIDS-STANDARD CO.
342 Rapistan Bldg., Grand Rapids 2, Mich.

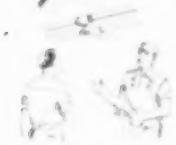
New design of the permanently mounted Floor Tracer conveyor, to carry from one floor to another in two stacks with a hand-over horizontal delivery section as shown in the illustration. The hand-over section on the standard machine is 10 ft. long with the plane of the main belt and is 30 in. in height. A standard turn-back module permits attaching a longer section or a direct hookup to a quickly poled conveyor for continuous flow.

All Makers of Items And All Other Products Are Listed In THOMAS REGISTER — Descriptions — Ratings — See Page 10

▼ BREEZITY—Identify by IEN-6822 if you write the maker ▼

O.B. No. 11 Outside Screw Bonnet Valve. Available in globe or angle from ½-inch to 3-inch sizes and suitable for general industrial use, air, oil, gas, water, or steam. For rated with 150 lb. W.S.P. steam discs for temperatures up to 350° F. Other type discs available on request.

REPLACING WORN VALVES *again?*



You can end the valve replacement problem in your plant at no extra cost. Extra heavy, solid cast O.B. valves provide the sturdiness you need for safety on higher industrial pressures and steam service. All parts are cast of high grade bronze and accurately machined to assure you leaktight joints and trouble-free operation.

Disc change is simple, for the outside screw-over bonnet design permits easy take-down.

See your local O.B. distributor whenever you need a better industrial valve.

OHIO BRASS COMPANY — MANSFIELD 7, OHIO

Ohio Brass VALVES

▼ BREEZITY—Identify by IEN-6823 if you write the maker ▼

YOU CAN BE SURE... IF IT'S

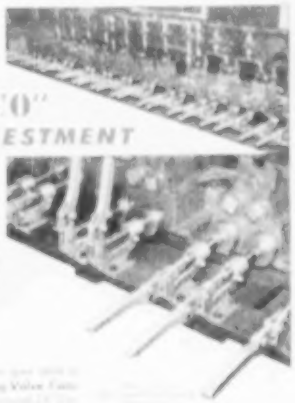
Westinghouse

The MOTOR SENTINEL — a rugged, compact manual motor starter, which also provides positive bimetallic overload protection. For single-phase motors to 1 hp. a.c. or d.c. Completely redesigned, greatly improved size, convenient, accessible, attractive. Many extra-value features. Combination: Die-cast, dust-resistant, watertight, dust-tight, explosion-proof. Also fits any standard 2½" deep wall box for flush applications. Economical time saving Westinghouse distributor, or write Westinghouse Electric Corporation, P.O. Box 868, Pittsburgh 30, Pennsylvania. 13-00416

Westinghouse
MANUAL MOTOR STARTERS

▼ BREEZITY—Identify by IEN-6824 if you write the maker ▼

$100 "DE-STA-CO" CLAMP INVESTMENT

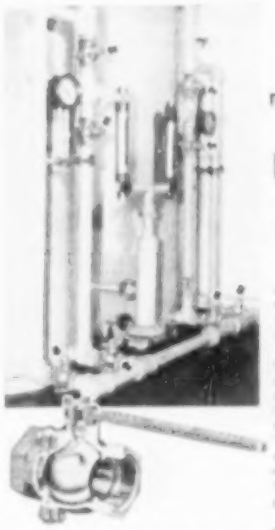


saves over **$5000** each shift per year

Existing or 12 new Dual-Hand Operated Clamps pay off in less than one year in Four Operating Value Fields: Time & Motion Study Engineers, Production Engineers, Plant Engineers, Tool Engineers. Write for Bulletin 1-A. Distributors in all principal cities.

DETROIT STAMPING COMPANY
141 MIDLAND AVENUE
DETROIT 3, MICHIGAN

▼ BREEZITY—Identify by IEN-6825 if you write the maker ▼



REDUCE maintenance cost with ROCKWOOD BALL TYPE VALVES

Longer service life with no maintenance is a primary advantage of the Rockwood Ball Type Valve that pays off in dollars and cents year in and year out.

The maintenance engineer of this large gas company was quickly convinced that the choice of Rockwood Valves for gasoline lines on "overhauling cranes" had been sound. Says this engineer: "The full round flow, leak proof power, easy operation and no maintenance and make Rockwood Valves far ahead of any competitive valve we used."

Rockwood Valves are today giving excellent performance in difficult operations in oil refineries, food, paper, chemical and rubber plants, etc. It will pay you to specify and buy Rockwood Valves. Send for Bulletin V-4. Distributors in all principal cities.

Rockwood Valves are recommended for 200 p.s.i. working pressure. Made in bronze with threaded ends in all pipe sizes from ½" to 2".

ROCKWOOD SPRINKLER CO.
40 HARLOW STREET WORCESTER 5, MASS.

▼ BREEFIT—Identify by IEN - 6826 if you write the maker ▼

To your specifications. Any washer material. Prompt delivery; any quantity, large or small.

To your specifications. Quadriga also completely fabricates articles that include stampings as components.

Quadriga QUALITY

OUTSTANDING ECONOMIES are often effected by Quadriga's long specialization and facilities for rapid production of Washers and Metal Stampings. Complete Catalog illustrates Quadriga range with valuable engineering data. But do not hesitate to bring special requirements to Quadriga. Quadriga precision and finish put the final touch on the perfection of your product.

Send Spec. R.P. or samples for prompt estimate.

THE QUADRIGA MANUFACTURING CO.
215 A W. Grand Avenue Chicago 10, Ill.

▼ BREEFIT—Identify by IEN - 6827 if you write the maker ▼

Lamson & Sessions Tapping Screws are true champions of the production line. They start quickly in drilled or punched holes; bite cleanly into the metal and withstand high torque stress when tightened. There are no fumbling — no time or material waste.

Whatever your metals mean, with them's a Lamson Tapping Screw with the right type head and thread. Heads are available with slots or with Phillips, Clutch and other type recesses.

Write for complete information on Lamson Tapping Screws. It will pay you to standardize on them.

THE LAMSON & SESSIONS COMPANY
General Offices: 1874 West 25th St., Cleveland 2, Ohio
Plants at Cleveland and Niles, Ohio • Birmingham • Chicago

Lamson & Sessions
"One Dependable Source for All Fastener Needs"

▼ BREEFIT—Identify by IEN - 6828 if you write the maker ▼

NO OTHER STEAM GENERATOR COMPARES WITH "POWERMASTER"!

ORR & SEMBOWER
Powermaster
STEAM GENERATORS

Fast delivery in many sizes, in one, two, three and four-pass, for 50, 60, 75 pounds and higher pressures. Low first cost and low operating cost. Now:

- Low fuel consumption through high efficiency
- Packaged design saves excessive installation costs
- Automatic operation frees engineer for other duties
- Mounted on steel base—no foundation required
- Delivered fully wired and factory-tested
- Widespread service by factory-trained men

Built and guaranteed to pass 50 mm. Type ASME, Section I, "Power Boilers" and carry the "U" stamp. Write today for catalog and complete information.

ORR & SEMBOWER, INC.
860 Morgantown Rd. • Reading, Pa.

▼ BREEFIT—Identify by IEN - 6829 if you write the maker ▼

TRUCK . . Three wheel engine driven platform unit for light fast delivery

Source: SALSBURY MOTORS DIV.
1205 E. Lexington Ave., Pomona, Calif.

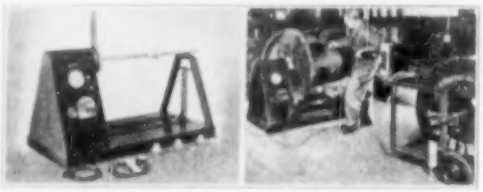
Package Car is a new assembly in the company's line of engine-driven trucks and utility vehicles. It mounts a load platform equipped with crate sides to measure about 52 by 52 inches. Load capacity — this platform is 500 pounds. The operator rides back of the platform in an upholstered seat. He controls speeds to 32 mph. by adjustment at a foot throttle. The 8½-hp. single-cylinder gasoline engine drives with a centrifugal clutch and transmission that engages, disengages and changes in drive ratio in step with operating speed.

Wheelbase measures 64 inches. Length overall is 101 in. with overall width at 56 in. and greatest height at 58 inches. Road clearance is 7 in. under the frame and 5½ in. under the axle. Weight empty is 465 pounds.

▼ BREEFIT—Identify by IEN - 6830 if you write the maker ▼

HANDLING . . Winding machine to transfer wire and cable for delivery

Source: MARION ELECTRIC CO.
21648-52 Wyoming, Detroit 20, Mich.



Reel-O-Matic is a new motor-driven winding machine to take electric wire or cable from a supply reel and wind it on a reel for delivery to a given order. The machine employs one motor to raise and lower an elevator base for reel positioning or removal and a second motor to rotate the removable spindle. Both operate on 110 volt ac., the elevator motor control shown in the view to the right.

The machine takes reels to 48 in. in diameter by 30 in. in width. Base dimensions are 60 by 30 inches.

▼ BREEFIT—Identify by IEN - 6831 if you write the maker ▼

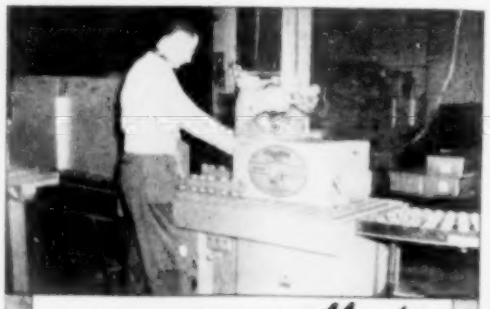
SAWING . . Sound color film shows use of portable chain saws in cutting wood

Tinsley Dunlap & Sons Inc.
49 Tuscany St., Philadelphia 35, Pa.

Group showings now are being arranged through Princeton Film Center for new 16-mm. color motion picture on chain saws, "The Woodcutter's Dream". The film shows how these portable tools are used for felling timber and cutting wood.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 30

▼ BREEFIT—Identify by IEN - 6832 if you write the maker ▼



WE'VE CONVINCED *Maytag* NOW HOW ABOUT YOU?

● We demonstrated how the efficient Reliable Rust Staple Machines can find a place from the pots, pans and bottom manufacturers . . . how each did secure the choice . . . how Consistent Weight and Postal Regulations were met . . . and how time and money could be saved.

Now we also have the opportunity of showing these things to you!

EST. 1938

INTERNATIONAL STAPLE & MACHINE CO.
HAVERTOWN 5, PENNA.

DISTRIBUTORS IN PRINCIPAL CITIES

▼ BREEFIT—Identify by IEN - 6833 if you write the maker ▼

NOW, a soldering gun for all types of work. The new Weller Gun with 250 watt rating handles heavy soldering with ease . . . yet the compact, lightweight design makes it equally suited for delicate jobs, and getting into tight-set spots.

Fast 5 second heating, extra ½" length and new RIGID-TIP mean real soldering efficiency. "Over and under" positional terminals increase rigidity with perfectured spotlight. Closed-shape RIGID-TIP gives more soldering area for faster heat transfer, and new design provides leaving action for heavy jobs. No need to unplug, gun heats only when you pull the trigger. Order from your distributor or write for bulletin direct.

WELLER MANUFACTURING COMPANY
823 Packer Street • Easton, Pa.

SOLDERING TIPS
Get your copy of the new Weller guide to easier, faster soldering—20 pages, fully illustrated. Use on your distributor's or order direct.

▼ BREEFIT—Identify by IEN - 6834 if you write the maker ▼

LEPEL *offers a New*

LOW COST *High Frequency* HEATING UNIT

AT A PRICE SO LOW THAT NO MACHINE SHOP, TOOL ROOM OR LABORATORY CAN AFFORD TO BE WITHOUT IT!

Unit illustrated brazing carbide tips to cutting tools. Shanks up to 1½" square can be satisfactorily brazed.

- **SMALL and COMPACT** Conveniently operated on bench or table—no mounting necessary.
- **ECONOMICAL OPERATION** No special power installation required. Operates on 110 volts, 60 or 50 cycle line at unity power factor.
- **FULLY GUARANTEED** Guaranteed for continuous duty cycle and stated performance.
- **LOW COST** Complete unit with line connection and load coil — $780.00 f.o.b. factory

DOES ALL THESE JOBS *Faster, Better and Cheaper*
BRAZING, SOLDERING, HARDENING, ANNEALING, DRAWING AND MELTING

WILL HEAT TO 1500° F.

⅛" steel rod 1" length in approx.	1 second
¼" " " " " "	3 seconds
½" " " " " "	15 seconds
1" " " " " "	60 seconds

Will melt 4 ounces of brass or steel in 4 minutes.
Equally well suited for heating of non-ferrous metals.

HARDEN SOLDER **Lepel** BRAZE MELT

LEPEL HIGH FREQUENCY LABORATORIES, Inc., 39 West 60th Street, New York 23, N. Y.

▼ DREFITT—Identify by IEN-6836 if you write the maker ▼

For Tight, Safe Connections on Hose for Every Service...

"BOSS"

WASHER TYPE FEMALE COUPLING STYLE W-16

For all high or low pressure steam, air and fluids, including oil, hydraulics, fumes, etc. Furnished with efficient "Boss" Offset and Interlocking Clamps. Designed to provide unequalled strength, efficiency and safety, and to prevent damage to hose ends. Sizes ½" to 6". Cadmium plated—rustproof.

Stocked by Manufacturers and Jobbers of Mechanical Rubber Goods

DIXON VALVE & COUPLING CO.
HANCOCK ST. and COLUMBIA AVE., PHILADELPHIA 22, PA., U.S.A.
BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON • TORONTO

▼ DREFITT—Identify by IEN-6837 if you write the maker ▼

DRIPRINT

TRY this better dry-developed print paper and discover new **Uniform Quality**

Prints are as alike as peas in a pod, with denser, sharper black, blue or red lines on snowy white backgrounds, when the print paper is DRIPRINT. More and more print users now insist on DRIPRINT, especially among those already familiar with the amazing advantages of ammonia-developed reproduction. Faster and cost-saving, because no washing or drying is required, DRIPRINT cuts hours where every minute counts. Permanent, fade-proof, easy to draw on, write on, alter, DRIPRINT prints are tough, stand up under repeated folding, rough use. Sepia lines on transparent bond or vellum are available for "intermediate" prints.

EUGENE DIETZGEN CO. • Chicago • New York • San Francisco
New Orleans • Los Angeles • Pittsburgh • Washington
Philadelphia • Milwaukee. *Dealers in All Principal Cities.*

FREE SAMPLES

Test DRIPRINT in your own drying, ultra-fast work. Write on your company letterhead for trial samples, and without obligation.

DIETZGEN
DRAFTING, SURVEYING & PRINT-MAKING MATERIALS, INSTRUMENTS & EQUIPMENT

▼ DREFITT—Identify by IEN-6839 if you write the maker ▼

HANDLING . . Cable reel grab manipulates 2½ ton reels of wire

Source: CLEVELAND CRANE & ENGINEERING CO.
1137 E. 283rd St., Wickliffe, Ohio

A motor-driven expanding arbor mount into a 2½ ton reel of wire rope. The rear two grips or spikes. The motor expands the arbor to grip the reel. Two other motors control spins, independently rotate it 360° and move the reel to pulpit or subpulpit, only as the reel will come already to be to will turn, between horizontal and vertical positions. A fourth motor drives the hoist carriage along a rail of the company's Transfer-Track control system at a particularly season for all of the movements.

▼ DREFITT—Identify by IEN-6840 if you write the maker ▼

GAGE . . Hand sighting level shows inclination on a vertical scale

Source: BINOSCOPE CO.
P. O. Box 9384-A, Philadelphia 39, Pa.

List price is $2 for this low level. It is a aid in establishing a horizontal or inclined grade for installation of drains, foundations and for concrete grading. The instrument measures 3 in. in length and is made of brass with an eyepiece and a graduated vertical scale reading above and below horizontal. Operating instructions are provided.

▼ DREFITT—Identify by IEN-6841 if you write the maker ▼

HYGROMETER . . Thermometer assembly with slide rule for relative humidity

Source: WESTON ELECTRICAL INSTRUMENT CORP.
612-16 Frelinghuysen Ave., Newark 5, N. J.

Humidicator Model 8704 is a new assembly of wet and dry bulb thermometers in a plastic housing that measures about 6 by 4⅛ by ⅝ inch. The slide cover on the housing face is a plastic slide rule on which readings from the two thermometers are matched to provide a reading of relative humidity. The unit can be carried in a pocket and the wick on the wet bulb moistened with an eyedropper. Or permanent assembly can be made on a wall with a wick dipping into a water container. Accuracy is within 2 per cent in normal use.

All Makers of These And All Other Products Are Listed In THOMAS REGISTER . . Descriptions . . Ratings . . See Page 50

▼ DREFITT—Identify by IEN-6842 if you write the maker ▼

FREE SANITARY SURVEY!

Let your Dolge Service Man make a complete sanitary survey of your premises with a view to helping achieve more effective, efficient, economical maintenance.

Send for Booklet No. 12

The C. B. DOLGE CO.
WESTPORT, CONNECTICUT

▼ DREFITT—Identify by IEN-6843 if you write the maker ▼

ENGINE PRODUCTION SPEEDED WITH VACUUM

Some years ago this manufacturer of auto engines installed a Spencer 7½ HP Stationary Vacuum Cleaner to pick babbitt out of engine heads as they passed by on the production line. Much time was saved and they reclaimed half a ton of babbitt a day. Now the plant is provided with overhead Vacuum connections wherever needed all along the production line.

Spencer is also used for removing or conveying liquids, fumes, powders and hot materials. 356-6

150 USES FOR VACUUM...ASK FOR BULLETIN
THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER

▼ DREFITT—Identify by IEN-6844 if you write the maker ▼

For low-cost handling of liquids, *investigate this*—

Delivers 70 gallons per 100 strokes—capacity of 10 ft. lift—self priming—no foot valve needed.

No manual motion—pump on both forward and back strokes—steady flow of liquid—easy to operate.

Only double action pump with a single diaphragm—long lived, molded diaphragm—reinforced—no piston leakage—95% volumetric efficiency.

These outstanding features put this new Tokheim pump in a class of its own! Efficient. Fast delivery. Easy to operate. Handles petroleum and paint oils as well as many other industrial liquids. Built of non-corrosive materials. Ice, dirt and scale will not interfere with its operation. Available in several models for drums, underground tanks and pipe lines—with hose or spout outlet.

TOKHEIM OIL TANK AND PUMP COMPANY
General Products Division • 1404 Wabash Ave. • Fort Wayne 1, Ind.
Factory Branch: 1108 Howard Street, San Francisco 3, California

▼ DREFITT—Identify by IEN-6845 if you write the maker ▼

SCREWS

Machine, Wood, Cap, Lag, Set, Knurled and Thumb Screws

Brass, Bronzes, Aluminum, Monel, Stainless Steels

Large stocks ready for immediate delivery from distributors and warehouses in principal cities.

FREE STOCK LIST

The H. M. Harper Company,
8211 Lehigh Ave.
Morton Grove, Ill.

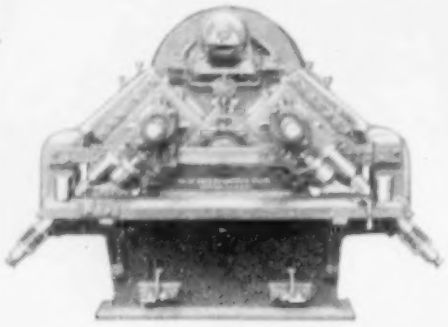
Please rush your current stock list of your screws and machine screw hardware showing sizes, sizes and types available for immediate shipment.

Name
Company
Address
City Zone State

▼ REBUTTI—Identify by IEN-6846 if you write the maker ▼

KLING DOUBLE ANGLE SHEARS

SLASH SHEARING COSTS



High speed—High production

Round bars and bar angles are sheared on left side, structural angles and flat bars on right side. Automatic hold-downs. T type roller supports.

Available in 4 sizes
Send for complete description

KLING BROS. Engineering Works
Chicago 51, Illinois
1326-1E Nth Kostner Avenue

▼ REBUTTI—Identify by IEN-6847 if you write the maker ▼

UNIVERSAL INDUSTRIAL CONVEYOR

Low First Cost . . . .
Low Maintenance

Illustrated is used at Air punch press operation. Other models designed to meet a wide range of conveyor problems.

Literature and estimates on request

- Removable sides to permit handling large castings or parts.
- Main totally enclosed, oil-tight, universal drive easily accessible through removable overdoing panel.
- Elevator is floated height with simple hoisting mechanism.
- Driven by series of roller chain-to-other power equipped gear box.
- Main drive shaft and other pulley operate on double sealed ball bearing.
- Standard belt width, 12 inches. Other widths can be furnished to meet your requirements.
- Belt speed, 70 F.P.M.—adjustable if desired.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
GRIMFIELD, INDIANA, U.S.A.

▼ REBUTTI—Identify by IEN-6848 if you write the maker ▼

How'd you like your shapes today?

We serve your light metal shapes any way you want 'em, at lowest cost—roll formed or extruded.

We also custom make shapes quickly and precisely—just send a precise drawing of the sections and data on quantity, alloy, lengths, finish, etc. You'll get unbiased advice on which type to use. For we make extruded shapes in aluminum—rolled shapes in aluminum, stainless steel, brass, zinc, etc.

Secondary fabrication, polishing, punching, drilling, slotting. Fast deliveries; strips, coils or cut to exact length.

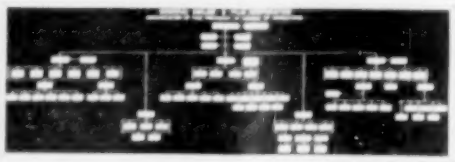
Free Write us for money-saving Bulletin IB-10

R. D. WERNER CO., INC.
295 Fifth Ave., New York 16, N. Y.
Manufacturers of Metal Extrusions and Rolled Shapes

▼ REBUTTI—Identify by IEN-6849 if you write the maker ▼

MANAGEMENT . . Organization chart can be set up and changed as required

Source: MANAGEMENT CONTROL CHARTS CO.
1729-33 N. Wells St., Chicago 14, Ill.



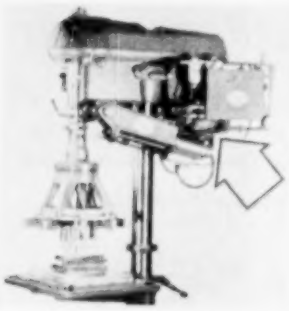
Plywood is grained laminated with light veneers, is faced with five clear extends into the groove and is bound on the edges with aluminum panel in this new organization chart. Dozen plastic strips and figures complete the title. Each panel strips hanger that fit into the groove. Transparent plastic and holders are supported in a frame of sizes to take printed working or typed information for the body of the chart. Each holder has hangers to fit in the groove. Plastic flanged strips form the horizontal and vertical connecting lines of authority. A finished wood frame ready for use is now supplied glass window completes the assembly.

Any overall size can be specified of which a number are stored in stock. The back part can be removed from the rear window frame and photocopied to make copies of the chart in a press wrap or blueprint a change. Background color can be specified in various dark green, black or white. Back assembly includes hangers for wall mounting.

▼ REBUTTI—Identify by IEN-6850 if you write the maker ▼

DRILLING . . Air feed attachment, also to tap on small drilling machine

Source: BECKETT-HARCUM CO.
1138-42 Wayne Road, Wilmington, Ohio



New attachment mounts on the side of a drilling machine equipped with air cylinder to feed the spindle and the screwed-operated [illegible] control [illegible] percentage. Designed BCS 1-9-8-5-1 it converts a simple [illegible] feed shaft on the machine for 270 deg. of rotation on a standard design and 1½ deg. in a heavy duty design. These corresponding to 2⅝ and 4 in. of spindle movement from a 1¼ in. pinion shaft. Provision for the feed movement range between 4 and 240 lb. on the standard design, 10 and 1,250 lb. on the heavy duty model.

Four types include a simplified unit for drilling only, one that provides dwell at the bottom of the feed movement, one for drill, reverse for chip clearance and [illegible] to dwell, and one that adds reversing control for tapping as well as drilling. This combination unit can be equipped with any three phase motor on the drilling machine at extra cost.

All Makers of These And All Other Products Are Listed In THOMAS REGISTER Descriptions Ratings . . See Page 10

▼ REBUTTI—Identify by IEN-6851 if you write the maker ▼

LITTELL Air Blast Valves

AUTOMATICALLY and INSTANTLY EJECT PIECES FROM PRESS . . .

Save TIME . . . . Faster production and lower labor costs.

Save AIR . . . . . Reduce air consumption 92 percent.

Save DIES . . . . . No damage to dies due to clogging.

Save HANDS . . Keep operators' hands out of danger zone.

F.J. Littell MACHINE CO.
4133 RAVENSWOOD AVENUE, CHICAGO 13, ILL.

▼ REBUTTI—Identify by IEN-6852 if you write the maker ▼

DARNELL CASTERS

DARNELL CORP. LTD.
LONG BEACH 4, CALIFORNIA
60 WALKER ST., NEW YORK 13, N.Y.
36 N. CLINTON, CHICAGO 6, ILL.

▼ REBUTTI—Identify by IEN-6853 if you write the maker ▼

Problems of Torque, Backlash and Deliveries

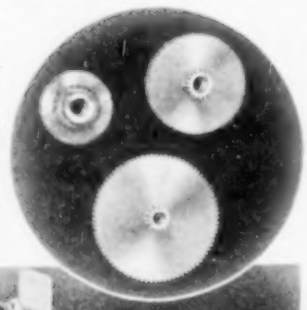
SOLVED by G.S. GEARING

DUMONT has gained an enviable reputation for the superior excellence of their Television Receivers. The high quality of the famous DU MONT Instrument shown below has contributed substantially to the success of this fine product. The smooth action, freedom from backlash and low torque in the associated Gearing mechanism used in the dial arrangement are advantages contributed by G.S. *Du Mont writes:* "Gear Specialties was the only concern able to come up with Gears which would meet our requirements . . . throughout the subsequent production run, G.S. has consistently maintained its quality and met its delivery schedules."

If *decidedly better* Fractional Horsepower Gearing is also an essential requirement in YOUR business, talk it over with our capable engineers. Benefit from the greater knowledge and experience only 30 years of intensive specialization can give. Ideas, suggestions and production run cost estimates incur no obligation.

SEND FOR:

Free G.S. Catalog Bulletin describing many different types and applications of our Fractional Horsepower Gearing. Write today!



GEAR Specialties, Inc.

Spurs · Spirals · Helicals · Bevels · Internals · Worm Gearing · Racks · Thread Grinding

2635 WEST MEDILL AVE., CHICAGO 47, ILL.

WORLD'S LARGEST EXCLUSIVE MANUFACTURERS OF FRACTIONAL HORSEPOWER GEARING

▼ DIRECT—Identify by IEN-6855 if you write the maker ▼

Increased Insulation

BETTER CONNECTIONS

JONES BARRIER TERMINAL STRIPS

Leakage path is increased—direct shorts from frayed terminal wires prevented by bakelite barriers placed between terminals. Binder screws and terminals brass, nickel-plated. Insulation, black molded bakelite. Finest construction. Add much to equipment's effect.

Jones Means Proven Quality

Illustrated: Screw Terminals—Screw and Solder Terminals—Screw Terminal above Panel with Solder Terminal below. Every type of connection.

Six series meet every requirement: No. 140, 5-40 screws; No. 141, 8-32 screws; No. 142, 8-32 screws; No. 150, 10-32 screws; No. 151, 12-32 screws; No. 152, 1/4-28 screws.

Catalog No. 17 lists complete line of Barrier Strips and other Jones Electrical Connecting Devices. Send for your copy.

Send for complete data on this new basic improvement

Jones

HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▼ DIRECT—Identify by IEN-6856 if you write the maker ▼

Specify

GRC WING NUTS

TO DO A GOOD JOB

LOOK BETTER,

COST LESS!

GRC offers quick service, low cost on strong, good-looking wing nuts of rust-proof zinc alloy. All commercial finishes, all popular thread sizes. Wing nuts with special threads or untapped wing nuts also available. Inquiries invited for special wing nut designs.

Write today for samples and prices

IMMEDIATE DELIVERIES IN ANY QUANTITY

GRIES REPRODUCER CORP.

797 EAST 132nd STREET, NEW YORK 54, N. Y.

▼ DIRECT—Identify by IEN-6857 if you write the maker ▼

THE MATEER ELECTRIC FILLER HANDLES THEM ALL!

LIQUIDS · OILS · POWDERS · PASTES

COMBINED LIQUIDS AND SOLIDS

1/500 oz. to 2 Pounds
20 to 70 Per Minute
Up to 750° F.

SAVE TIME AND MONEY WITH THE MATEER ALL ELECTRIC FILLING HEAD

Totally enclosed, manual or automatic. Accurate as close as 1/500. Synchronize this self contained filling head with existing production lines and processing systems.

Jacketed and electrically heated hoppers available for handling cold and hot materials up to 750° F.

Hot waxes, insulating compounds and asphalts handled without difficulty.

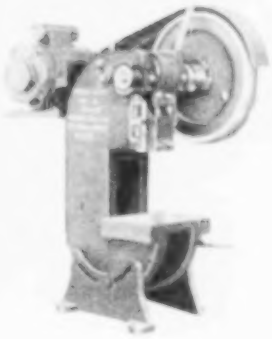
Send full information and samples of material to be tested. Write Dept. 104 for fully illustrated bulletin.

G. DIEHL MATEER & CO.
Lincoln Highway • Devon, Pa.

▼ DIRECT—Identify by IEN-6858 if you write the maker ▼

PRESS . . Open back, inclinable, rates 5 ton, roller bearing flywheel

Source: SALES SERVICE MACHINE TOOL CO.
2361-65 University Ave., St. Paul 4, Minn.



New design [illegible] Standard stroke [illegible]

▼ DIRECT—Identify by IEN-6859 if you write the maker ▼

PROTECTING . . Car wheel block cradles wheel to prevent movement

Source: NOLAN CO.
114 Pennsylvania St., Bowerston, Ohio

Model [illegible] [illegible]

▼ DIRECT—Identify by IEN-6860 if you write the maker ▼

DRIVES . . New gear service to supply standard units in about 200 combinations

Elite Ring Gear & Machine Co.
[illegible] W. Monroe Blvd., Chicago 9, Ill.

"Duti-Rated" [illegible]

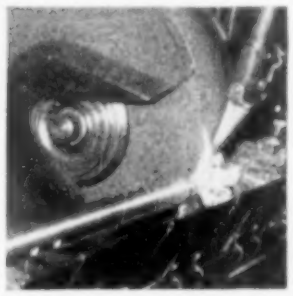
All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 10

▼ DIRECT—Identify by IEN-6861 if you write the maker ▼

GREATER CUTTING EFFICIENCY

Moisture-Free

CHICAGO CUT-OFF WHEELS



IN NEW SEALED PACKAGES

Your finest cut-off wheel is now better than ever! Chicago Wheel's exclusive new moisture-proof package keeps it Factory-Fresh and ready to use. Cutting efficiency now can be increased as much as 10% . . . for faster action . . . longer wheel life.

Write today for free descriptive booklet

CHICAGO WHEEL & MFG. CO.
Dept. N7, 1101 W. Monroe St., Chicago 7, Ill.

▼ DIRECT—Identify by IEN-6862 if you write the maker ▼

Where there's a will . . .
There's a better way!

SAVE
TIME • MONEY
PREVENT DAMAGE TO MACHINERY WITH THE . . .

CLEMENTS CADILLAC

Made in 5 models with attachments for every cleaning job.

PORTABLE COMBINATION BLOWER-SUCTION CLEANER

CLEMENTS MFG. CO.
[illegible] CHICAGO 28, ILL.

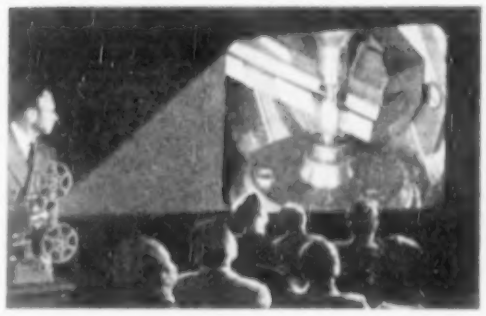
ASK YOUR MILL SUPPLY DEALER OR WRITE US FOR DATA

▼ DIRECT—Identify by IEN-6863 if you write the maker ▼

Action too fast to see

can be studied here

over and over again



You can photograph mechanical motion or fluid flow with the Kodak High Speed Camera, taking up to 3200 pictures a second on 16mm movie film. When the film is projected at regular speed, you can watch the motion slowed down 200 times.

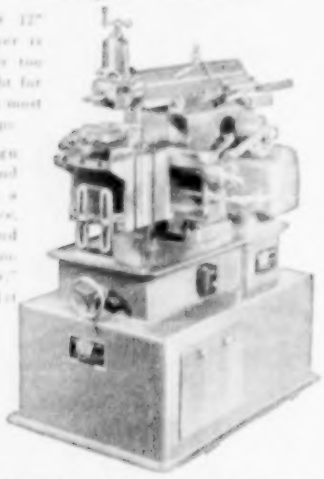
Seeing the dynamic facts in "slow motion"—whenever and wherever you want to show them—brings quick answers to design and processing problems. Send for the booklet, "Magnifying Time." Eastman Kodak Company, Industrial Photographic Division, Rochester 4, N. Y.

the Kodak High Speed Camera

Kodak
TRADE MARK

▼ BREEFIT—Identify by IEN - 6865 if you write the maker ▼

Big Shaper Performance Small Shaper Price



The SHELDON 12" Burk Geared Shaper is neither too big, nor too small. It is just right for most shaper work in most tool rooms and shops.

In weight, design features, capacity and performance, it is a "big shaper." In price, operating cost and floor space, it resembles a "small shaper." It is the logical 1st shaper for the small shop and a cost-cutting tool in multiple installations in large plants.

Write for Catalog

SHELDON
CHICAGO

SHELDON MACHINE CO., Inc., 4208 N. Knox Ave., Chicago 41, Illinois

▼ BREEFIT—Identify by IEN - 6866 if you write the maker ▼

New! . . . Smaller Size . . . Same Power Output . . . Bigger Value!

SYNCHRON TIMING MOTOR

Newly designed —to cut costs in timing devices of all kinds

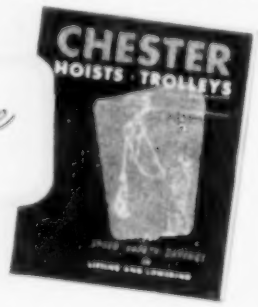
Motor has slow speed of 600 R.P.M. Light weight rotor with aluminum spider of large diameter synchronizes instantly at 1/12th revolution. Compact only 1-7/8 in. x 1-5/16 in. Pulls 8 oz. direct lead at 1 R.P.M. Self-lubricating. Operates efficiently in any position, any required speed—110 or 220 Volts. Available as single motors, or with gear trains or complete timing machines and clock movements.

If you make or repair timing devices—of any kind—get the facts regarding this motor, and get our prices.

HANSEN MANUFACTURING CO., INC.
Princeton 2, Indiana

Established 1907—A Pioneer in Synchronous Motors
TIMING MOTORS • TIME MACHINES • CLOCK MOVEMENTS

▼ BREEFIT—Identify by IEN - 6867 if you write the maker ▼



Here's where to get . . .

USEFUL HOIST DATA

This new Chester Hoist Catalog gives you complete information for selecting the right hoist for the job. For example:

- Capacities available (hand geared and differential)
- List prices
- Regular lift in feet
- Minimum distance between hooks
- Equipped with hand chain or lever
- Chain pull to lift full load
- Feet of chain required for 1 ft. lift
- Test load in pounds

Send for your copy today

THE NATIONAL SCREW & MFG. CO.
Chester Hoist Div. Lisbon, Ohio

IN-4

NEWS NOTES

Keeper and announcements to keep you informed on sources of special assistance for your data problems. Subjects include unusually helpful manufacturers' literature, bulletins of industrial interest, slide films and motion pictures on buying or product information, unusual applications of existing equipment, formation of new service organizations, new processes, expeditions, conventions. Copies of printed material and films are available. Any limiting conditions are noted.

▼ BREEFIT—Identify by IEN - 6868 if you write the maker ▼

AIR CONDITIONING . . . Revised information in 1950 edition of the ASHVE Guide, a 1,446-page book

American Society of Heating & Ventilating Engineers
51 Madison Ave., New York 10, N. Y.

Three principal sections (page one new 20th Edition of the "Heating, Ventilating and Air Conditioning Guide"). The first is a section on technical data for design and specification. The second is a manufacturers' catalog section. The third is an index and classified directory. List price is $7.00.

New information has been added to 29 of the 30 chapters in the technical section. Major topics include fundamentals, human reactions, heating and cooling loads, combustion and transmission of heat, systems and equipments, air quality, cooling.

▼ BREEFIT—Identify by IEN - 6869 if you write the maker ▼

ALUMINUM . . . Making miter welds without flash described in house publication

Reynolds Metals Co.
2500 S. 3rd St., Louisville 1, Ky.

Current issue of the company's informative house publication carries an article on the welding of miter joints in aluminum shapes with a minimum of flash. The method is based on pressure applied during the welding process. A schematic diagram shows operation in the article. It is tied into the text by captions. Type of finished work produced is illustrated. Ask for a copy of "Technical Advisor No. 13" when you write.

▼ BREEFIT—Identify by IEN - 6870 if you write the maker ▼

BEARINGS . . . Application drawings to show mounting methods and uses of miniature bearings

Lucas D. Gay, Inc.
104 Fifth Ave., Room 1402, New York 11, N. Y.

Mounting Bulletin No. 1 presents sectional drawings on a variety of equipment in which the company's miniature ball bearings are an essential part. Dental equipment, aircraft instruments, weighing scales, meters, clockwork mechanisms, music boxes, drafting instruments are typical. Notes describe the features of operation of each, radial or pivot application.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 50

▼ BREEFIT—Identify by IEN - 6871 if you write the maker ▼

You Need It
IN YOUR PLANT

What a Truck! Check These Points:

- Capacities available (hand geared and differential)
- List prices
- Regular lift in feet
- Minimum distance between hooks
- Equipped with hand chain or lever
- Chain pull to lift full load
- Feet of chain required for 1 ft. lift
- Test load in pounds

SERVICE CASTER & TRUCK CORP.

Executive Offices: Albion, Michigan
Plants at Albion, Michigan and Somerville 43, Mass.
Representatives in all Principal Cities

▼ BREEFIT—Identify by IEN - 6872 if you write the maker ▼

Streamline your hand labeling with new

Mystik
Self-Stik **Labels**

FAST! Stick instantly, by pressure, without glue, water or heat. Save time, speed production.

EASY! Solve tough labeling problems, for hard to label surfaces or locations.

PERMANENT! Won't dry out, curl up or come loose—yet can be removed without a trace.

BEAUTIFUL! Printed in any color combination, die-cut to any shape. Better labels for every purpose . . . to sell or identify or for instructions.

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For Every Industrial Need!

VACO
BREAK-PROOF
SHOCK-PROOF
Screw Drivers

UL

Fire Safe Handles

Large or small, square shank or round, extra long or stubby, there IS a Vaco screw driver for every screw used in your plant. Whether it's a regular, Phillips, Reed and Prince, screw holding, clutch head or Allen fit, Vaco makes 'em all. To find out how Vaco can serve you, write for

FREE 30-Page Catalog

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MORE THAN 250 TYPES AND SIZES

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Vapor-Clarkson STEAM CLEANERS

Sixty gallons of vaporized cleaning solution per hour at pressure up to 200 lbs.

Plenty of hot solution to operate two steam guns at the same time, with ample reserve power for all cleaning jobs. No idle time lost in waiting. The Model 4942 Vapor Steam Cleaner generates 100 lbs. of steam pressure in one minute from a cold start. Scientifically engineered, Model 4942 is not low in initial cost, but does the work 3 to 4 times faster.

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PORTABLE. Take it anywhere. For cleaning and stripping paint, cleaning and coloring.

MAXIMUM FUEL ECONOMY. Uses diesel oil or gasoline in emergency.

EFFICIENT OPERATION. Can be used continuously for other jobs by one operator.

FULLY AUTOMATIC. Can be operated by anyone in your shop or plant by turning one switch and regulating the steam pressure required.

Made by the manufacturers of the famous VAPOR CLARKSON STEAM GENERATORS used on airliners every Diesel passenger locomotive in this continent.

Write for Bulletin 112

VAPOR HEATING CORPORATION
80 East Jackson Blvd., Chicago 4, Illinois

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SAFETYMIX

EXTRA SHOWER SAFETY

. . . at no extra cost

PROTECTS AGAINST SUDDEN SCALDS

. . . Safetymix, world's leading pressure-actuated non-scald shower valve gives safety in the shower. Safetymix automatically shuts down flow if either hot or cold water fails.

HOLDS SHOWER TEMPERATURE CONSTANT

. . . Even with excessive pressure fluctuations up to 85%, Safetymix still maintains constant discharge temperature.

LIFETIME SHOWER VALVE

. . . The most rugged shower control valve made. Only Safetymix has the patented Flow Control Spindle with but one moving part to control *all* valve functions. Built to last a lifetime.

GET FREEDOM FROM COSTLY MAINTENANCE

. . . Safetymix is designed with self-cleaning action to prevent clogging and save water. All parts accessible from the front. As easy to fix as a faucet.

(30,000 Installations Can't Be Wrong. Used by U. S. Army, Navy, Merchant Marine, colleges, industrial plants, hotels, clubs, hospitals, apartments and homes.)

Send for bulletin and prices.

SAFETYMIX — MADE BY THE MAKERS OF THE NEW SYMMONS TEMPERING-CONTROLLER

Symmons ENGINEERING COMPANY
791 TREMONT ST., BOSTON 18, MASS.

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Prefabricated Ric-wil Accessories lower installation costs and insure top operating performance.

The complete Ric-wil Pipe Engineering Service assists engineers and contractors, and assures users of Ric-wil Insulated Piping of the most economical installation and high-efficiency performance. Ric-wil piping engineers can help solve special or intricate piping problems with a prefabricated system that will match the original cost estimate and fit accurately when it gets to the job.

All Ric-wil products are engineered—not to a general requirement—but to the specific requirement of the user. They are built of the finest tested and proven materials.

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RIC-WIL
THE RIC-WIL COMPANY · CLEVELAND 5

OVERHEAD • UNDERGROUND

FOR FORTY YEARS THE GREATEST NAME IN INSULATED PIPING SYSTEMS

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Solid as a Rock!

the REED

PATENTED PORTABLE TRIPOD VISE

One unit. Folds compactly, carries easily and sets up instantly. A quick downward push on the patented, large-surface tray locks the stand solidly so that all cutting or threading effort goes into the work. Legs cannot buckle under any working conditions. They line up vertically with the face of the well-known REED long-jaw vise. Ask your jobber or write.

REED
Registered

MANUFACTURING COMPANY
ERIE, PENNSYLVANIA

NEWS NOTES—*Continued*

"How to use the Rivnut"

▼ BREEFIT—Directly to IEN-6878 if you write the maker ▼

CHEMICALS . . . Handling suggestions for phosphoric acid in tank car quantities

Monsanto Chemicals Co.
1702 S. Second St., St. Louis 4, Mo.

Properties of 75 percent phosphoric acid, safety hazards, handling equipment, unloading and unloading procedures are presented topics in new 8-page booklet. A drawing shows piping arrangement to empty tank containing 60,000 lbs.

▼ BREEFIT—Directly to IEN-6879 if you write the maker ▼

CLEANING . . . How steam spray machines work described in booklet along with operating suggestions

Dolling Co.
1116-22 W. Fourth St., Cincinnati 3, Ohio

General information on steam spray cleaning machines is illustrated in a schematic drawing in new 12-page booklet 8-106. Principal features of steel construction, boilers, exact fuel consumption, causes of scale formation, maintenance and principal losses.

▼ BREEFIT—Directly to IEN-6880 if you write the maker ▼

CONVEYING . . . House publication reviews applications of company's equipment

Stephens-Adamson Mfg. Co.
215 Ridgeway, Aurora, Ill.

Current issue of the "Conveyor", company's house publication, is a 20-page folder of applications stories that may suggest an idea for your own plant. How the Zipper conveyor handles granular raw materials without dust, how the Redler conveys in steel for products from drop to cork, how our pulleys protect railroad cars for self-unloading boats are examples. Your name added to mailing list upon request.

▼ BREEFIT—Directly to IEN-6881 if you write the maker ▼

CUTTING . . . Technical article reprint on how to use carbide tools in screw machines

Carboloy Co.
1116 E. 8 Mile Road, Detroit 12, Mich.

J. S. Gillespie, company's Manager of Tool Sales Engineering, wrote an article that appeared recently in the technical literature. Title is "How to Use Carbide Tools in Automatic Screw Machines for Steel Cutting." It covers machine requirements, false back, speeds and feeds, cut-off tools, drills, threading tools. Drawings show operating sequence on parts.

▼ BREEFIT—Directly to IEN-6882 if you write the maker ▼

FASTENINGS . . . Information on the Rivnut including installation methods and tools in bulletin

B. F. Goodrich Co.
448-52 S. Main St., Akron 11, Ohio

How to select the correct type of the company's blind rivet, how to use it as a stud, fastening and as a thread insert, standard sizes and dimensions are among the information in new 20-page Rivnut Data Book. The new bulletin will be sent upon letterhead request. Please address the company direct.

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 16

▼ BREEFIT—Directly to IEN-6883 if you write the maker ▼

Over Half of America's Top Companies Use "Speed Sweep"

THE BRUSH WITH THE STEEL BACK

BECAUSE it sweeps faster and cleaner, and outlasts ordinary brushes 3 to 1, Speed Sweep has become the No. 1 sweeping tool of American industry—used by over 50,000 firms. Whether you use a few or a lot of brushes, you'll find it pays to switch to Speed Sweep.

If you for order, size and price

MD MILWAUKEE DUSTLESS BRUSH CO.
MILWAUKEE 2, WISCONSIN

▼ BREEFIT—Directly to IEN-6884 if you write the maker ▼

COULDN'T BE HANDLED BETTER IF THEY WERE GOLD-PLATED!

That's the opinion expressed by the Midwest manufacturer when Lewis Skid Boxes were installed in the plating department. The unique wires, wood and wire construction provides no pocket-boxes handling with maximum good, not production. Plan now to lower your handling costs . . . send for details.

G. B. LEWIS CO.
40 MONT ST.
WATERTOWN, WISCONSIN

SKID BOXES
STACKING BOXES
SHIPPING BOXES
BOX TRUCKS

LEWIS
INDUSTRIAL CONTAINERS

Also Mfrs. of Airplane Propellers, Sea Wars, Venetian Blind Slats, and Golf Ball Washers

▼ BREEFIT—Directly to IEN-6885 if you write the maker ▼

Super Cycle

constant speed under load

The CP Super Cycle Grinder gives more output per man-hour than any other type of portable grinder, because it maintains cutting speed under load. has more power per pound than any other type of portable tool. operating speed remains constant throughout life of tool. maintenance is low. no brushes to replace. no armature to burn out. Squirrel cage induction type motor; 360 cycle, 3-phase, 220 volt. Write for Catalog 9012.

CHICAGO PNEUMATIC TOOL COMPANY
General Offices: 9 East 40th Street, New York 17, N. Y.

PNEUMATIC TOOLS • AIR COMPRESSORS • ELECTRIC TOOLS • DIESEL ENGINES
ROCK DRILLS • HYDRAULIC TOOLS • VACUUM PUMPS • AVIATION ACCESSORIES

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ONLY ONE MOVING PART..

A small, stainless steel valve that floats on the condensate load . . . keeps maintenance at a minimum. Continuous discharge under heavy loads, frequent under light loads, gets equipment hot, coolest and keeps it hot. Over 600,000 YarWays already installed. Sold by distributors throughout the world.

YARNALL-WARING CO., 122 Mermaid Ave., Phila. 18, Pa.

▼ REPRINT—Identify by IEN-6887 if you write the maker ▼

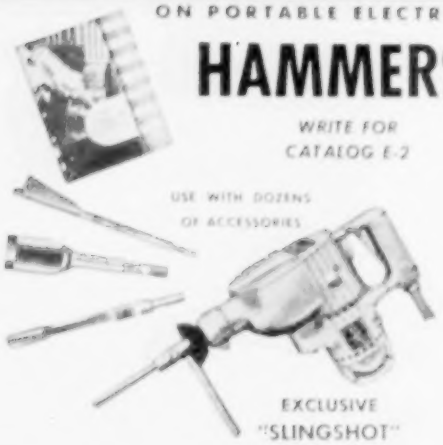
GET THE Thor STORY

ON PORTABLE ELECTRIC

HAMMERS

WRITE FOR CATALOG E-2

USE WITH DOZENS OF ACCESSORIES



EXCLUSIVE "SLINGSHOT" DRIVE

Bolt Sanders · Bench Grinders · Drills · Grinders · Hammers · Impact Wrenches · Nibblers · Saw Tackers · Polishers · Sanders · Saws · Screwdrivers

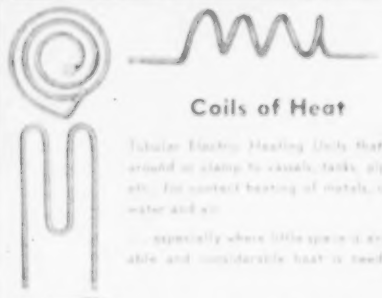
Thor TOOLS

INDEPENDENT PNEUMATIC TOOL CO., AURORA, ILL.

▼ REPRINT—Identify by IEN-6888 if you write the maker ▼

VULCAN

ELECTRIC HEATING UNITS



Coils of Heat

Tubular Electric Heating Units that fit around or clamp to vessels, tanks, pipes, etc., for contact heating of metals, oils, water and air.

... especially where little space is available and considerable heat is needed.

STANDARD SIZES or made to your requirements.

VULCAN ELECTRIC COMPANY

DANVERS 2, MASS.

Makers of Vulcan Electric Soldering Irons, Electric Solder Pots, Electric Branding Irons and Electric Heating Units including the new Vulcan 500 Series, for changing over any hot water heater to electric operation.

▼ REPRINT—Identify by IEN-6889 if you write the maker ▼

NEW Odee-HONE

A Single Tool for Honing any CYLINDRICAL SURFACE

from 1/2" to 2 1/2"

in diameter — any length

Simple to set up and operate

- LIGHTWEIGHT
- VERSATILE
- ACCURATE
- INEXPENSIVE

Removes stock—Holds accurate size—Generates round, straight surfaces—Develops any degree of surface finish without chatter. Use with any lathe, drill press or electric drill.

For complete information write or call

MICROMATIC HONE CORPORATION

8100 SCHOOLCRAFT • DETROIT 4, MICHIGAN

NEWS NOTES—Continued

"Concise statement on good will"

▼ REPRINT—Identify by IEN-6890 if you write the maker ▼

FOUNDRIES . . . Information booklet of facts and figures for foundry use

Working Data

Cleveland Lightnings Inc., Cleveland, O.

Revised edition is available of this company's pocket booklet, "Useful Information for Foundrymen." Its 44 pages include information on capacity, operating, heating electric furnace data, thermal properties of metals, data on combustion, melting, cupola, temperature conversion tables, fuel values.

▼ REPRINT—Identify by IEN-6891 if you write the maker ▼

GOOD WILL . . . Like a good name is won by many acts and lost by one

Parsons, Huntington & Co.

[illegible] W. 42nd St., Room [illegible], New York 18, N. Y.

The above statement is quoted from a new metal transfer which the company offers to send you on request. The booklet is printed in red, gold and black on a cream paper [illegible] 3 to 2 [illegible].

▼ REPRINT—Identify by IEN-6892 if you write the maker ▼

HARD FACING . . . Technical article reprint describes its applications in the steel industry

Kit-Manufacturing Sales Co.

[illegible] Lincoln Bldg., New York 17, N. Y.

J. J. Barry, company's hard facing specialist, wrote this article which appeared first in "Iron Steel Engineer Magazine." Now it has been reprinted as 8-page brochure AHH-61 and will be mailed on request. It covers types of hard facing alloys, service conditions and field examples in the steel industry.

▼ REPRINT—Identify by IEN-6893 if you write the maker ▼

HEATING . . . Book of connection diagrams for steam heated building and equipment lines

[illegible] Engineering Bldg., New York 17, N. Y.

Sixth Edition of "Steam Heating Hookups" is a 64-page reference book on how to select and install steam traps and compressors, regulating valves, valve operators, recommended pipes and equipment arrangements for industrial steam traps, building heating, industrial temperature control, water service. The book is available on a reserved request basis. Write on company letterhead. To save time, [illegible].

▼ REPRINT—Identify by IEN-6894 if you write the maker ▼

MANAGEMENT . . . Map of the U.S.A. shows colleges that graduated company's employees

General Aniline & Film Corp.

230 Park Ave., Rm. 1015, New York 17, N. Y.

Location of 1,000 colleges from which company employees received degrees is shown on map, "Life Plans—College Map." On the back is a list of employees [illegible] by colleges. The list includes [illegible] employees.

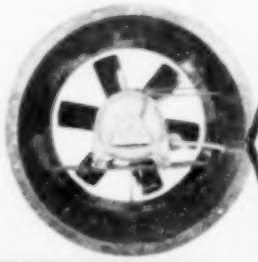
All Makers of Items And All Other Products Are Listed In THOMAS REGISTER . . . Descriptions . . . Ratings . . . See Page 50

▼ REPRINT—Identify by IEN-6895 if you write the maker ▼

▼ REPRINT—Identify by IEN-6896 if you write the maker ▼

PLACE YOUR VENTILATING PROBLEM IN OUR HANDS

TUBEAXIAL FANS by ROBINSON



Will Solve Your Ventilating Problem!

ROBINSON VENTILATING COMPANY

ZELIENOPLE, PENNA.

Efficiently handles large volumes of air at moderate pressures, unusually well adapted for exhausting smoke, fumes, light dust, etc., from hoods or conditioning booths and spray booths.

End flanges provide convenient installation in duct systems, direct drive, or V-belt, your operation conditions dictate the type and size.

ASK FOR BULLETIN NO. 6001

MAKERS OF FANS AND VENTILATING EQUIPMENT FOR FIFTY YEARS

▼ REPRINT—Identify by IEN-6897 if you write the maker ▼

Make it easy for your workers to move materials—and you take a big step toward lower handling costs. That's one of the reasons why it pays to use boxes, cans and valet receptacles made from Diamond Fibre. This durable material weighs only ⅓ as much as aluminum—yet is plenty strong for long hard use. It won't get readily cracked, splintered, or shattered. Its smooth, tough finish makes it safe for handling anything from fine fabrics to steel products. For faster, easier materials handling, write for Catalog R-50, today.

C-D DIAMOND FIBRE RECEPTACLES

CONTINENTAL-DIAMOND FIBRE CO., NEWARK 21, DEL.

▼ REPRINT—Identify by IEN-6898 if you write the maker ▼

NOW—IMPROVED

for faster, better plant cleaning

The NEW HOFFCO-VAC 50 Heavy Duty VACUUM CLEANER

Compare the Advantages write for Bulletin A-794

Two-sweeper unit, for operating two 50-foot lengths of 1½ inch hose simultaneously, or one 75 or 100-foot length of 2-inch hose.

Handles like lighter, smaller machines but provides super-duty, high-capacity, continuous cleaning. Outstanding features include self-lubricated ball bearings and spring mounting of vacuum producer and motor. Successor to the famous Hoffco-Vac originated in 1939, the new #50 is one of 4 sizes of portables built by Hoffman. Stationary systems available, too, in a wide range of sizes.

AIR APPLIANCE DIVISION

U.S. HOFFMAN MACHINERY CORPORATION

103 Fourth Ave., New York 3, N. Y.

Canadian Plant: Canadian Hoffman, Newmarket, Ont.

▼ BREEZIT—Identify by IEN-6899 if you write the maker ▼

Check **Speed** OF OPERATING EQUIPMENT
RPM or FPM
for Performance Efficiency
with a JONES TACHOMETER

Machinery speeds are the basis of production control. With JONES Portable or Fixed TACHOMETERS applied to your machinery, you can accurately control production time as well as the entire production line capacity by checking RPM of motors, rollers, shafts, etc. JONES TACHOMETERS measure speeds either in RPM, feet or yards per minute, total output, or any desired indication.

Write for bulletin No. 146-2

JONES MOTROLA CORP.
STAMFORD, CONN.

▼ BREEZIT—Identify by IEN-6900 if you write the maker ▼

Utensil Manufacturer Solves Rust Problem with ALCOA ALUMINUM FASTENERS

To make a good product better—you can't go wrong with Alcoa Aluminum Fasteners. Take the case of the utensils made by the Mardigian Corporation, whose aluminum utensils were excellent except that plated fasteners in the handle assemblies rusted in use. Mardigian eliminated all rust problems by switching to Alcoa Aluminum Fasteners—lowest cost corrosion resistant fasteners they—or you—can buy.

WRITE FOR FREE SAMPLES

Why not see how lustrous Alcoa Aluminum Fasteners can help dress up your product and eliminate corrosion problems? Simply write us, on your letterhead, specify the types and sizes you're interested in, and we'll send you the samples by return mail. Write to: ALUMINUM COMPANY OF AMERICA, 2176 G Gulf Bldg., Pittsburgh 19, Pa.

THE LOWEST-COST CORROSION-RESISTANT FASTENERS ARE
ALCOA *Aluminum* FASTENERS

INGOT • SHEET & PLATE • SHAPES, ROLLED & EXTRUDED • WIRE • ROD • BAR • TUBING • PIPE SAND, DIE & PERMANENT MOLD CASTINGS • FORGINGS • IMPACT EXTRUSIONS • ELECTRICAL CONDUCTORS • SCREW MACHINE PRODUCTS • FABRICATED PRODUCTS • FASTENERS • FOIL ALUMINUM PIGMENTS • MAGNESIUM PRODUCTS

NEWS NOTES—*Continued*

"List of high-frequency heater makers"

▼ BREEZIT—Identify by IEN-6902 if you write the maker ▼

HEATING . . . High frequency equipment for induction and dielectric heating, drying, brazing

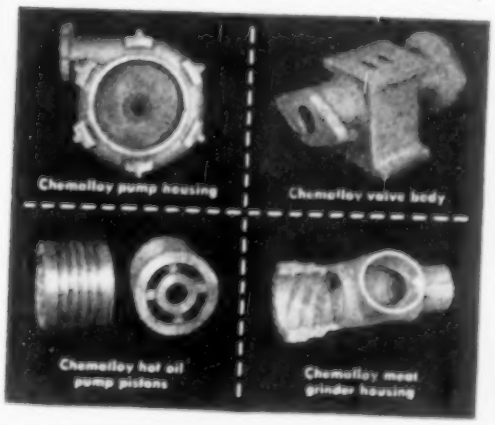
Here is a second list—over that previously published (IEN 6010-47) to bring you up to date on induction and dielectric heating equipment described in Industrial Equipment News for the following manufacturers:

Airtronics Mfg. Co., 5183-47 W. San Fernando, Los Angeles 26, Calif.
Ajax Electrothermic Corp., 34 Ajax Park, Trenton 5, N. J.
Allis-Chalmers Mfg. Co., 909 S. 70th St., Milwaukee 14, Wis.
Barker & Williamson, 233-37 Fairfield Ave., Upper Darby, Pa.
G. M. Diehl Machine Works Inc., 1950 S. Wabash Ave., Wabash, Ind.
Esco High Frequency Elec. Corp., 7018-22 Hudson Blvd., N. Bergen, N. J.
Electric Arc, Inc., 162 Jelliff Ave., Newark 8, N. J.
Electric Eye Equipment Co., 14-18 W. Fairchild St., Danville, Ill.
Electronic Heating Associates, 73-77 Jefferson St., Newton 58, Mass.
General Electric Co., Dept. 68-201, Schenectady 5, N. Y.
Girdler Corp., 222-26 E. Broadway, Louisville 1, Ky.
Hayde Brothers, P. O. Box 1226-A, Plainfield, N. J.
High Frequency Heating Co., 141-45 Olive Park Ave., Gary, Ind.
Hyatt Bearings Div., General Motors, 425-29 Middlesex, Harrison, N. J.
Induction Heating Corp., 179-83 Wythe Ave., Brooklyn 11, N. Y.
Lepel High Frequency Labs., 39 W. 60th St., 4th Flr., New York 23, N. Y.
Lindberg Engineering Co., 2455 W. Hubbard St., Chicago 12, Ill.
Marion Electrical Instrument Co., Stark Street Gate, Manchester, N. H.
Mayflower Electronic Devices, 6012-16 Hudson Blvd., W. New York, N. J.
Northwest Syndicate, Inc., 709-13 St. Helens Ave., Tacoma 1, Wash.
Ohio Crankshaft Co., 1810 Harvard Ave., Cleveland 1, Ohio
Pan-American Electronics, 5814-18 S. Santa Fe, Los Angeles 11, Calif.
Plastic Welding Corp., 405-9 Broome St., New York 12, N. Y.
R. C. A. Mfg. Co., 1941 Front & Cooper, Camden, N. J.
Radio Frequency Corp., 1142-46 Commonwealth Ave., Boston 34, Mass.
Radio Receptor Co., 251 W. 19th St., 5th Flr., New York 11, N. Y.
Scientific Electric Co., 109-13 Monroe St., Garfield, N. J.
Sherman Industrial Electronics, 501-05 Washington, Belleville 9, N. J.
Short Wave Plastic Forming Co., 2919-21 W. Alameda St., Burbank, Calif.
Singer Sewing Machine Co., 705 Singer Bldg., New York 3, N. Y.
Spectron Mfg. Co., 5110-42 N. 5th St., Philadelphia 31, Pa.
Union Special Machine Co., 402 N. Franklin St., Chicago 10, Ill.
Walden-Fleckhaugh Co., R. D. 3, A.A., York, Pa.
Weltronic Co., 19502 W. Eight Mile Rd., Detroit 19, Mich.
Westinghouse Electric Corp., 2519 Wilkens Ave., Baltimore 1, Md.
Woodworking Inc., 1002 W. Olive St., Burbank, Calif.

NOTE: Manufacturers of the above equipment are not furnished in advance of, and it does take time to supply the required information to supply this information on specific equipment has given work and expense. Inclusion of this list is not intended as endorsement.

All Makers of These And All Other Products Are Listed in THOMAS REGISTER Descriptions, Ratings — See Page 58

▼ BREEZIT—Identify by IEN-6903 if you write the maker ▼



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Chemalloy is not just one alloy, but a group of alloys—each developed to combat certain corrosive conditions. Wherever your corrosion problem requires stainless, Ni-Resist* or other high alloy, investigate Chemalloy. Write for Bulletin 3-171. Electro-Alloys Division, 1999 Taylor Street, Elyria, Ohio.

*Reg. U. S. Pat. Off.

AMERICAN Brake Shoe COMPANY — ELECTRO-ALLOYS DIVISION ELYRIA, OHIO

▼ BREEZIT—Identify by IEN-6904 if you write the maker ▼

Fluid Power improves production

"LOGAN" AIR AND HYDRAULIC POWER-OPERATED CHUCKS

...WITH OPEN OR CLOSED CENTER

32 years' engineering know-how • Completely equipped plant • Satisfaction assured • Complete range of standard types • Extra factors of strength and durability • Accurate, dependable service.

For your complete air and hydraulic chucking system, Logan offers an extensive line of rotating cylinders, control valves, accessories, hydraulic power units and Collet Grip tube fittings.

ENGINEERING SERVICE

Our engineers will solve your chucking problems with Logan specialists, assist in and collet chucks for adaptation.

FREE CATALOGS

Logan Air and Hydraulic Equipment
LOGANSPORT MACHINE CO., INC.

FLUID POWER SPECIALISTS SINCE 1916

▼ BREEZIT—Identify by IEN-6905 if you write the maker ▼

NOW! A wiping tissue 100% grit-free

To make your cleaning operations efficient—economical, Fresh, Soft, Disposable Kimwipes* industrial wiping tissues. Polish finished surfaces without scratching. Blot up to 15 times their weight in liquids. And so inexpensive, you can use a new tissue every time.

*Reg. U. S. Pat. Off.

AUTOMATIC SERVE OF PACKAGES

Write for further information and name of the Kimwipes distributor nearest you.

Kimberly-Clark Corporation, Neenah, Wisconsin

▼ BREEZIT—Identify by IEN-6906 if you write the maker ▼

MANY INDUSTRIAL **ROLL** PROBLEMS are solved by using

SHAF-TITE* ROLLS

Many patented construction provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel, plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.

SEND FOR NEW CATALOG NO. 48
Most complete publication of its kind.

Industrial Roll Division
RODNEY HUNT MACHINE CO.
123 Maple Street, Orange, Mass.

*Reg. U. S. Pat. Off.

▼ BRIEFITT—Identify by IEN - 6907 if you write the maker ▼

STEEL STRAPPING EQUIPMENT PAYS FOR ITSELF IN JUST 3 WEEKS

—for this Leather Manufacturer!

More proof that Stanley Steel Strapping cuts shipping costs is almost any product. A Stanley representative called in for survey recommended Stanley Air Strapping Tool to this leather manufacturer.

Result: bundles of skins packed double. Equipment paid for itself in 3 weeks. Find out what Stanley Steel Strapping can do for you now! The Stanley Works, Steel Strapping Div., 166 Lake St., New Britain, Conn.

STEEL STRAPPING AND CAR BANDING SYSTEMS

STANLEY

Reg. U.S. Pat. Off.

Hardware • Tools • Electric Tools • Steel Strapping • Steel

▼ BRIEFITT—Identify by IEN - 6908 if you write the maker ▼

...Bostitch May Cut Your Costs, Too

Among the more than 800 different Bostitch machines for stapling, tacking and wire-stitching, chances are you'll find what you need to cut your assembly costs. Thousands of other firms like yours are now satisfied users of the Bostitch fastening method. Why not investigate Bostitch savings? Mail the coupon below. Today.

ATTACH THIS COUPON TO YOUR LETTERHEAD

BOSTITCH, 147 Machine Tools Wentworth, R. I.

My problem involves fastening _____ to _____

I use _____

Please send me Data Sheet describing the BOSTITCH machine you believe will help me solve my fastening costs.

Name _____ Title _____

Firm _____

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City _____ Zone _____ State _____

BOSTITCH

fastens it better AND FASTER with wire

ALL TYPES OF MACHINES FOR APPLYING STAPLES

ALL TYPES OF STAPLES APPLIED BY MACHINES

Trade Mark "Bostitch" Registered U. S. Patent Office and Foreign Countries

NEWS NOTES—Continued

"New products available for license"

▼ BRIEFITT—Identify by IEN - 6910 if you write the maker ▼

LIGHTING . . . Recreational activities the subject of motion picture and information booklets

General Electric Co.
Dept. 6X-221, Schenectady 5, N. Y.

"A Chance to Play" (film [illegible] sound motion picture film) focuses the lens on the work in the company's "More Power to America" series. This film was produced under the technical supervision of the National Recreation Association. It stresses the benefits of recreational facilities to industry and the community. It will be made available on a loan-free basis arrangement or will be sold with a kit of educational material at the reproduction cost of $57 to industrial and civic organizations.

Other material in this Outdoor Recreation Program includes a manual, "Recreation, a Everybody's Business," prepared in cooperation with the Association. It stresses the civic side of recreation, contains a bibliography of helpful literature. "Industrial Recreation Is Good Business" (How a 12-page booklet for industry). "Manual of Floodlighting Poles" is a compilation of 63 pages for floodlighting all types of outdoor spaces. These plans are based on NEMA authoritative engineering information. A [illegible] handout booklet points out how each individual can help in his community.

▼ BRIEFITT—Identify by IEN - 6911 if you write the maker ▼

LUBRICATING . . . Illustrated suggestions in 16-page booklet on how to handle lubricants

Stewart-Warner Corp.
1829 Diversey Parkway, Chicago 14, Ill.

Pocket Booklet 22-165 starts with the oil storage room in a plant in its presentation of ways to handle and apply lubricants. It follows through with identification, dispensing, lubricant selection, portable and centralized application equipment. At the back is a "clock" set. Title is "11 Ways to Cut Production Costs."

▼ BRIEFITT—Identify by IEN - 6912 if you write the maker ▼

NEW PRODUCTS . . . Annual company report describes products brought up to the production stage

Commonwealth Engineering Co.
1773-75 Springfield St., Dayton 2, Ohio

Available for license are a number of new products developed by the company through the pilot stage ready for production. They are listed in new 24-page Annual Report along with information on the company's activities in research on new products, processes and production machines. Examples include freeze dehydration, dry metal plating, chemical byproduct reclamation.

▼ BRIEFITT—Identify by IEN - 6913 if you write the maker ▼

PACKAGING . . . Booklet of samples includes 21 types of glassine packaging papers

Ewald Paper Corp.
112 Madison Ave., 10th Fl. New York 17, N. Y.

Standard grades of glassine, greaseproof, sulphite papers that have been waxed, lacquered, laminated to meet special protective requirements are included in new 8-page folder, "Glassine". Samples are accompanied by information on their physical properties from a packaging standpoint.

All Makers of These And All Other Products Are Listed In THOMAS REGISTER . . . Descriptions . . . Ratings . . . See Page 10

▼ BRIEFITT—Identify by IEN - 6914 if you write the maker ▼

Outlast Ordinary Faucet Washers 6 to 1

You can stop costly faucet leaks that boost water, fuel and labor costs and ruin expensive fixtures. Insist on pat'd "EASY-TITE" Faucet Washers made of DUPONT NEOPRENE to withstand absorption and extreme high temperatures (upwards of 300° F). Fabric reinforced like a tire, "EASY-TITES" can't split or mush out of shape. Outlasting ordinary washers 6 to 1, "EASY-TITES" have cut faucet repairs to a minimum and brought maintenance costs sharply down in plants, hospitals, schools, hotels and institutions everywhere.

FREE! VALUABLE 112-PAGE CATALOG

Lists over 2,[illegible] 'SEXAUER' Triple Wear Replacement Parts and pat'd Precision Tools as advertised in the SATURDAY EVENING POST. Standard with leading maintenance engineers everywhere. Send a postcard for your free copy TODAY.

J. A. SEXAUER MFG. CO., INC.
2502-05 Third Ave., Dept. K-70, New York 51, N. Y.

SEXAUER

World's leading specialists in plumbing and heating maintenance.

▼ BRIEFITT—Identify by IEN - 6915 if you write the maker ▼

Cost conscious?

try

Accurate Springs

Cost conscious purchasing agents, engineers and production men examining their sources of supply will do well to consider Accurate as a source for springs, wire forms and small stampings. We at Accurate have an enviable record of saving money for our customers. Our production "know-how" is backed by a modern plant equipped with the very latest cutting springmaking machines to produce uniformly accurate components for your product.

We would welcome the opportunity to show you what we have done for others and what we can do for you. Give us a ring or write us today.

ACCURATE SPRING MFG. CO.
3807 W. Lake Street Chicago 24, Illinois

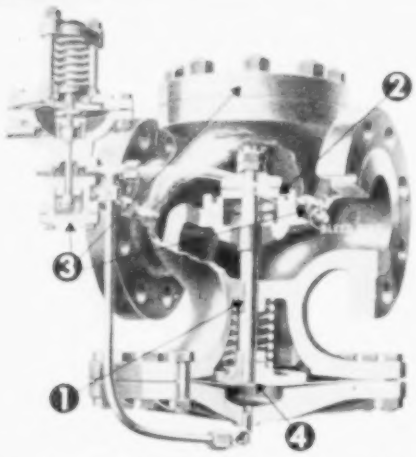
Accurate Spring

Springs — Wire Forms & Stampings

▼ BRIEFITT—Identify by IEN - 6916 if you write the maker ▼

Here's Why SPENCE REGULATORS

CUT COSTS . . . REDUCE MAINTENANCE



Thousands of installations throughout the country have proved that Spence Pilot-Operated Regulators provide *dependable, trouble-free* pressure and temperature control year-in, year-out. Here are a few of the many Spence features that save you money . . . help keep *maintenance at a minimum.*

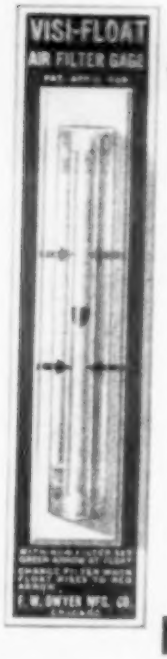
1. **PACKLESS CONSTRUCTION** of all Spence main valves and most pilots *eliminates the need for closely fitted parts* that may stick or bind due to uneven expansion or foreign matter.
2. **DURABLE SECO METAL SEATS AND DISCS** resist wiredrawing. More than 20 years of experience with SECO Metal *has failed to produce one case where it has been cut by steam.*
3. **EASY TO CLEAN WITHOUT DISMANTLING** — The seat and disc of the main valve and pilot can be cleaned and any working part removed *without taking the main valve out of the line.*
4. **LONG-LIFE METAL DIAPHRAGMS,** under usual conditions, never require replacement. The durable spring in the Spence Regulator operates at low unit stress . . . *out of the path of the steam* or other fluid flowing through the valve.

FREE BULLETIN NO. 4000 gives complete data . . . contains full color, fully illustrated description of the operating cycle of a Spence Regulator.

Spence

SPENCE ENGINEERING COMPANY, INC.
WALDEN, NEW YORK

▼ BREEZIT—Identify by IEN - 6918 if you write the maker ▼



New FILTER GAGE!

DWYER VISI-FLOAT

ONLY $3.25

First gage of its type for permanent mounting on forced air units, non-vital Testmark — self-operating. Tells if a plenum from fans of heater, air conditioner, or ventilator, motor fans are clogged and need replacement. No liquids, no mechanical parts to break down. VISI-FLOAT series tests to one. A clear lifetime, lucite body with a floating indicator. Connected across fan and heater constantly, to varying pressure drop due to dirt accumulation. Joins the life of the unit. Just drill two holes and mount. Let VISI-FLOAT set fan belts, allow more time planning for filter, reduce blower failure and repairs.

Send for descriptive folder.

F. W. Dwyer Mfg. Co.

107 South Western Avenue, Chicago 12, Ill.

▼ BREEZIT—Identify by IEN - 6919 if you write the maker ▼

NEW Outstanding Split Cutters

Increases Life of Engraving and Router Cutters

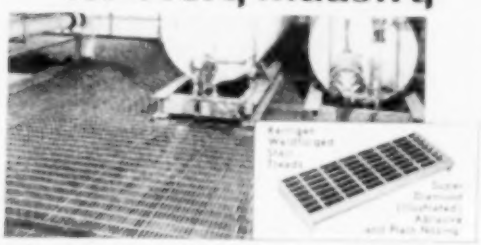
Save Time—Save Money
Reduced Tooling Time
Cutter Life Increased 500%
Strength at Points Increased
Four Points Available with One Tool
Grinding to Thickness Eliminated
Less Skill Required to Sharpen

The first improvement in Engraving Machine and Router Cutters since their invention years ago.

PITTSBURGH STENCIL AND TOOL COMPANY
405 PENN AVENUE • PITTSBURGH, PA.

▼ BREEZIT—Identify by IEN - 6920 if you write the maker ▼

A SAFER, OPEN STEEL STRONGER FLOOR for every industry



Send today for latest catalog — Write Dept. 22

Weldforged GRATING DIVISION

KERRIGAN IRON WORKS, INC.
NASHVILLE, TENNESSEE
GENERAL SALES OFFICE 274 MADISON AVE., N.Y.C.

NEWS NOTES—Concluded

"Industrial uses for photography"

▼ BREEZIT—Identify by IEN - 6921 if you write the maker ▼

PHOTOGRAPHY . . . How to use it
for engineering, testing, record storage in industry

Eastman Kodak Co.
343 State St., Rochester 4, N. Y.

"Functional Photography" is an illustrated 16-page booklet that describes how engineering and photographic equipment are employed in industry. Topics are high-speed motion, stereoscopic photomicrography, photographic screen systems, automatic recording, spectrometer, Dimo mapping, geometric.

▼ BREEZIT—Identify by IEN - 6922 if you write the maker ▼

RINGS . . . Of heat and welded metal
catalog presents weight and dimensional data

King Iron Wheel Co.
2825 N. 2nd St., Philadelphia 33, Pa.

Technical data in new 16-page catalog describes dimensions, weights of soft steel flat, angle, tee, accommodates standard pipe for thickness and wire, includes illustrations of lugged and square angle rings, dimensional specifications. Purpose of catalog describes facilities for welding heat, welded metal rings.

▼ BREEZIT—Identify by IEN - 6923 if you write the maker ▼

RIVETING . . . How to select rivets
by type and application detailed in new bulletin

Chicago Rivet & Machine Co.
9622 W. Jackson Blvd., Bellwood, Ill.

Price List No. 39 is new 12-page bulletin on tubular and split rivets in various metals. Its feature is a two-page section on how to select rivets. It contains a chart of standard finish allowances with hole diameters and drill numbers. Other data include weight per thousand with list prices, recommended specifications on available rivet setting machines.

▼ BREEZIT—Identify by IEN - 6924 if you write the maker ▼

RUBBER PARTS . . . Splash guards
made of rubber protect electrical equipment

United States Rubber Co.
1230 Avenue of the Americas, New York 20, N. Y.

Rubber replaces metal in this recently granted patent assignment covering a rubber splash guard for DC motors. The rubber guards keep brush, wire, oil and grease from spattering into electrical equipment on the car. They require a minimum of attention, do not rust or corrode, and have an operating periodic light.

▼ BREEZIT—Identify by IEN - 6925 if you write the maker ▼

WATER TREATING . . . What causes embrittlement
described in bulletin with information on control

Pfaudler-Permutit Mfg. Co.
929 S. 70th St., Milwaukee 14, Wis.

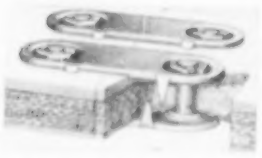
Steam boiler embrittlement is subject of new 4-page Information Bulletin 45 by the company's Water Conditioning Department. Summary conditions are described along with a review of recent developments in control, test methods.

All Makers of These And All Other Products Are Listed In THOMAS REGISTER . . . Descriptions . . . Ratings . . . See Page 50

▼ BREEZIT—Identify by IEN - 6926 if you write the maker ▼

FLEXCO BELT FASTENERS and RIP PLATES

FOR HEAVY CONVEYOR AND ELEVATOR BELTS OF ANY WIDTH



Compression Grip distributes strain over whole plate area

- FLEXCO Fasteners make tight butt splices of great strength and durability.
- Trough naturally operate smoothly through take-up pulleys.
- Distribute strain uniformly.
- Made of Steel, "Monel," "Everdur," Alvo Primal" top plates.
- FLEXCO Rip Plates are for bridging soft spots and FLEXCO Fasteners for patching or mending clean straight rips.

Order From Your Supply House. Ask for Bulletin F-100

FLEXIBLE STEEL LACING CO.
4610 Lexington St., Chicago 44, Ill.

▼ BREEZIT—Identify by IEN - 6927 if you write the maker ▼

MULTIPLE DRILLING with a MULTI-DRILL

INCREASES CAPACITY UP TO 800%

ADJUSTABLE TO ANY HOLE PATTERN . . . FITS ANY DRILL PRESS

COMMANDER MFG. CO.
4219 WEST KINZIE ST. CHICAGO 24, ILLINOIS

Product of Commander — Builder of the Commander Tapper

▼ BREEZIT—Identify by IEN - 6928 if you write the maker ▼

The best conveyor design combines
- ENGINEERING
- INGENUITY
- EXPERIENCE

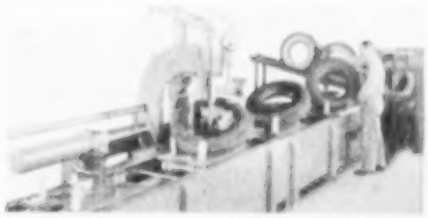
Dared the difficult to design a conveyor that will operate, but it's quite another matter to lay out a system that:

1 Utilizes every opportunity for economy.
2 Combines handling and manufacturing operations to the advantage of both.
3 Prevents accidents by avoiding hazards.
4 Operates without interruptions.

When you mechanize your materials handling, you can have a system of integrated efficiency.

Many when capacity is added to engineering and skills are limited to mechanical equipment in the immediate field.

If you appreciate the much greater of materials handling in your plant, let an MHS Engineer make a survey in your factory. It won't cost you anything and you stand a good chance of saving.



A typical case of combining transportation and assembly with delivery at the point where the item is to be used

MHS MECHANICAL HANDLING SYSTEMS, INC.
6605 NANCY AVENUE • DETROIT 17, MICHIGAN

▼ BREEZIT—Identify by IEN - 6929 if you write the maker ▼

HANSEN TACKER for 1001 uses

CHAIR seat covers—with a saving of 4c per seat—with motor, fast or work—are being tacked with the Hansen Model T-2 Tacker.

Joe L. Woodard Seat Co., Owosso, Mich., use this modern method. They find the Tacker does a more efficient job. It provides more seat covers, held securely in place.

Submit your tacking and fastening problems to Hansen, with sketch, sample and details.

Request Booklet

A. L. HANSEN MFG. CO.
5051 RAVENSWOOD AVE., CHICAGO 40, ILL.

▼ DIRECT—Identify by IEN-6930 if you write the maker ▼

DON'T BE A SLAVE TO LIGHT SWITCHES

You don't have to turn the sun on and off. Why not forget about your own electric lights, too, by installing G-E Time Switches?

YOU'LL SAVE on the time and trouble of switching your lights manually.

YOU'LL CUT POWER COSTS that mount up when you leave your lights on overtime.

TIME SWITCHES

General Electric time switches are ideal for process timing, plant lighting, pump and blower control, floodlighting, and many other uses. Check these two popular models:

The T-27 Time Switch: up to 12 operations per day. Indicator dial available.

The T-47 Time Switch: from 5 minutes to 22 hours between ON and OFF operations.

Ask your G-E representative to show you the way to greater savings with time switches. Apparatus Dept., General Electric Co., Schenectady 5, New York.

GENERAL ELECTRIC

▼ DIRECT—Identify by IEN-6931 if you write the maker ▼

Graham

THE FINEST VARIABLE SPEED DRIVE MADE

THE MODEL 10 A MIDGET DESIGNED SPECIFICALLY FOR SMALL MACHINES

SIZES UP TO 3 H. P.

ALL SPEEDS FROM TOP TO ZERO "ON THE MARK CONTROL"

Check the dimensions! The Model 10 is specifically designed for small machines as pumps, feeds and feeders, business machines, instruments and recorders, to list a few.

MODEL 10 SPECIFICATIONS

H.P. OUTPUT—1/15 H.P.
INPUT SPEED—1400 R.P.M. standard (other as required)
OUTPUT SPEED—from 1/2 (dial speed to zero and reverse)

AVG. TORQUE—50 in. oz.
CONTROL—Finger tip lever—on mechanism as shown
LUBRICATION—sealed in oil or grease

PROMPT DELIVERY WILL BE MADE UPON RECEIPT ORDER FOR A MODEL 10. Mail the Coupon.

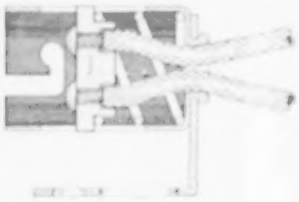
PRICED TO START AT $39.75 F.O.B. Milwaukee (or G.E.M. Service) Very quantity discounts

GRAHAM TRANSMISSIONS, INC.
Dept. IEN, 5224 N. Port St.
Milwaukee 11, Wisconsin

▼ DIRECT—Identify by IEN-6933 if you write the maker ▼

SIGNALING . . Insulated lamp socket takes double contact bayonet base lamp

Source: DIAL LIGHT CO. OF AMERICA
900 Broadway, 4th Fl., New York 3, N. Y.



Series NE12 is a new design of pilot lamp socket in which wire leads terminate inside the socket shell to contacts mounted on a ceramic disc. Receives on the under side, takes the wire covering so no live metal is exposed. The disc rotates easy, but keeps it in place. Wire ends with adhesive covering can be specified. The socket is listed by Underwriters' Laboratories Inc. and is suited particularly for the new No. 10-T10 pilot light lamp and for bayonet base appliance lamps with a recessed base.

▼ DIRECT—Identify by IEN-6934 if you write the maker ▼

STRIPPING . . Viscous liquid loosens paint and varnish to wipe off

Source: CHASCO INC.
P.O. Box 2808, Baltimore 2, Md.

Sample available upon request

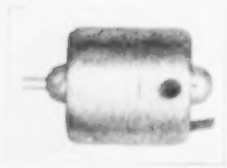
The S-Off is an amber, a quick paint and varnish-removing material, based on a patented formula, that has been in Government service for a number of years under Government Supply Specification PT R-25a. It is now being offered for general industrial use in removal of paint and varnish from metal and compact non-metallic surfaces. The material is sticky of creamy consistency and is applied by the brush method. It is allowed to remain on the surface for 5 to 20 minutes, then is removed with a putty knife or dispensable pad.

Application results in boomerang-like action that wipes off results and leaves a surface that can be operated or sandwiched without washing or further treatment. The material itself is non-inflammable, non-corrosive and will not explode. It should be used in areas where ventilation is adequate. Packaged in 1, 5 and 30-gal. containers.

▼ DIRECT—Identify by IEN-6935 if you write the maker ▼

MOTOR . . Universal design, rating to specification to 1/30 hp.

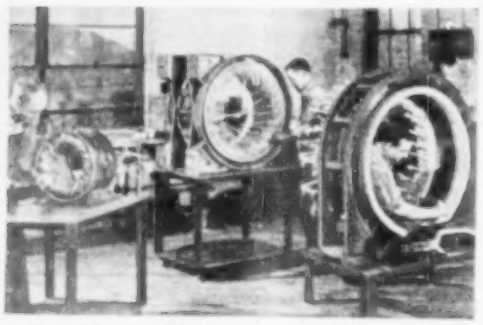
Source: RAE MOTOR CORP.
2007-11 Kewaunee St., Racine, Wis.



Type M2 designates new universal motor available in speeds up to 10,000 rpm. Built up construction on a plastic base. Fan cooling, weighs less than 1 lb. The rotor is mounted on a 3/8" shaft. The stator is of the salient shaft. This motor is of the housing or 2½ inches. Housing finish white or to specification.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 16

▼ DIRECT—Identify by IEN-6936 if you write the maker ▼



Rx for Ailing Motors –

DEPEND ON REPAIR SERVICE LIKE THIS!

A worker empty mouth (type of what Allis-Chalmers Co. called Service really means? Such a case? A 75 hp motor had an insulation failure. Chicago Electric, an A-C Certified Service Shop was called. In just 8 hours, the motor was completely repaired and back on the line!

You get this kind of service from any of the A-C Certified Service Shops in every major industrial area — service that meets factory standards in quality parts and workmanship. For new motors or controls, see, see your nearest A-C Certified Service Shop or Authorized Dealer.

ALLIS-CHALMERS, 900A SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS A-C

▼ DIRECT—Identify by IEN-6937 if you write the maker ▼

the BEST in Quality tools!

take this SCREWDRIVER for example

Notice the square, flared handle

It's made that way so you can get a good grip for more leverage. Pick it up — notice how comfortably it fits the hand, and it won't roll away when you lay it down.

The Duroloy handle is non-corrosive and plastic tough. The blade is forged from chrome alloy steel, hollow ground, accurately tempered, polished and chrome plated for extra protection.

Like other Duro Chrome Tools, nothing is spared to make it the finest that money can buy. Look now for that unusually recognized Duro Quality.

TO THE METAL PRODUCTS CO. 2040 North Kildare Avenue, Chicago 39, Illinois

DURO TOOLS (HAND TOOL DIVISION)

The Mechanic's Best Friend

OVER 2 BILLION BUILT SINCE 1918

Also Makers of Nationally Advertised DURO Power Tools

▼ DIRECT—Identify by IEN-6938 if you write the maker ▼

NEW *Sensational* *Flex-a-foam* **FILTER MASK**

STOPS DUST IRRITATION!

Easier to breathe through and talk through than an ordinary pocket handkerchief — yet filters non-toxic nuisance dusts as small as 1/25000 of an inch.

Extremely light weight — only 1 oz. complete.

Self-adjusting to every face size.

Attractively styled to suit the most discriminating wearer.

Simple in design: only four parts — four tough, long-wearing, interlocking parts.

Only respirator made with long-lasting washable filter — can be used over and over again.

Easier to wear

Easier to clean and keep clean

Trial Sample $1.50 Postpaid

Here's dust protection *your workers will welcome and WEAR!*

Write TODAY for Descriptive Circular

THE GOGGLE PARTS COMPANY
1468-70 W. 9th Street • Cleveland 13, Ohio

▼ DIRECT—Identify by IEN-6939 if you write the maker ▼

Uniformly Accurate ... BOLT THREADING WITH OSTER No. 902 Rapiduction

A wide variety of threading work is performed at production speeds and with sustained accuracy on this new machine. The "human element" is entirely eliminated in determining the exact moment the die head should be closed and the lead screw disengaged to obtain the length of thread desired. One solenoid trips the die-head. Another solenoid trips the lead screw. Both solenoids are controlled from a single limit switch. Write for complete information.

THE OSTER MANUFACTURING CO.
2053 East 61st Street
CLEVELAND 3,
OHIO, U. S. A.

OSTER

No. 902 "RAPIDUCTION" has standard bolt range N. C. 1/2" to 2", 12 pitch and from 1 1/2" to 2 1/4", pipe or nipple range 1/4" to 2".

▼ BRIEFITT—Identify by IEN - 6940 if you write the maker ▼

CANNON PLUGS

UA SERIES
(Ultimate Audio Connectors)

THREE 15-AMP. CONTACTS

Latest development in the connector phase of audio engineering is the new series of microphone and sound circuit connectors designed and built by Cannon Electric to RMA Committee requirements and standards. Briefly, following features should be noted: 1. *Safety interlock* 2. *Shock-proof* 3. *FULL Floating Socket Contacts* 4. *Spring-proof* 5. *Steel plug shells* 6. *Rubber sleeve for cable relief* 7. *Grounding Contact* 8. *Gold plated 15 amp. contacts for low loss.*

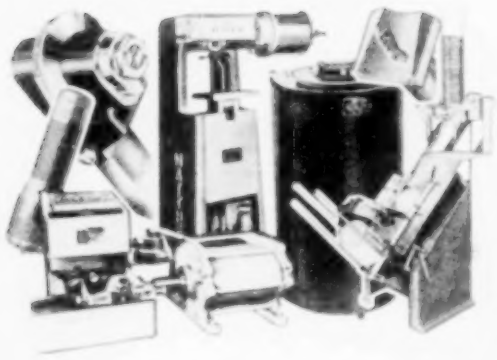
Write to Cannon Electric Development Company, Division of Cannon Electric Corporation, 3209 Humaton Street, Los Angeles 31, California, or contact one of the 19 authorized representatives nearest to you (see U. S. A. Cities, Canadian cities and Offices, Foreign Export Cables & Bureau, Inc. Exporters).

LINES INC.

CANNON ELECTRIC

▼ BRIEFITT—Identify by IEN - 6941 if you write the maker ▼

Whether it's Buttons or Battleships

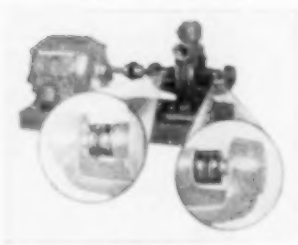


JAS. H. MATTHEWS & CO.
3948 FORBES ST., PITTSBURGH 13, PA.
NEW YORK BOSTON PHILADELPHIA CHICAGO
NEWARK SYRACUSE CLEVELAND CINCINNATI
DALLAS BIRMINGHAM LOS ANGELES

▼ BRIEFITT—Identify by IEN - 6943 if you write the maker ▼

PUMP . . Motor driven turbine type for boiler feed to 62 gpm. at 175 lb.

Source: FRED H. SCHAUB ENGINEERING CO.
2108-12 S. Marshall Blvd., Chicago 23, Ill.



Master Bill (designation new design of the turbine pump engineered for the compact, or for complete assembly of boiler-motor-pump unit). The new pump has the same performance characteristics as the pump previously developed and is available in single and two-stage assembly for service to 100 and to 200 pounds. It is now in the application of rotary shaft seals in place of the previous packing and to the sealed ball bearings that support the shaft. The bearings are factory lubricated and permanently sealed. The shaft seals will operate for two years or more without maintenance attention.

Smallest series of pumps in the line have ratings of 2 to 30 gpm. on 200-lb. maximum discharge pressure. Largest series rate 4.5 to 62 gpm. against 175 pounds. The smaller units are approximately 18½ by 2 to 10½ in. including pump and ¼ hp. motor. The largest measures about 28 by 18 by 28 inches.

▼ BRIEFITT—Identify by IEN - 6944 if you write the maker ▼

SLIP PROOFING . . Abrasive aggregate for use in concrete or asphalt floor

Source: METALS RECOVERY CO.
1352-56 N. Main St., Ann Arbor, Mich.

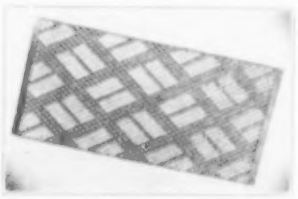
Abrasive action renews itself

Hendrlas (trade name) is a new aggregate made of crushed corundum-type bauxite, aluminum oxide. The material is screened in two grades: fine between 1/32 and 1/4 in., coarse between ¼ and ½ inch. Color is blue gray. The material is hard, abrasive and porous. It bonds well into the finish, presents a non-slip surface that will not wear smooth.

▼ BRIEFITT—Identify by IEN - 6945 if you write the maker ▼

FLOORS . . Rubber link mat custom made for color, size, pattern

Source: AMERICAN MAT CORP.
1711 Adams St., Toledo 2, Ohio



Lay Tred (trade name) is the mat that is molded particularly for office entrances, corridors. It is made up of surface-corrugated rubber links on extruded spring wire. The links measure 13½ in. in length, by ¾ in. in width. The mat can be rolled up. These conditions and features are made to order by specifications.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 16

▼ BRIEFITT—Identify by IEN - 6946 if you write the maker ▼

Handler tiers drums in storage

NEW...

ELWELL-PARKER Drum Handler
Speeds Work, Saves Space

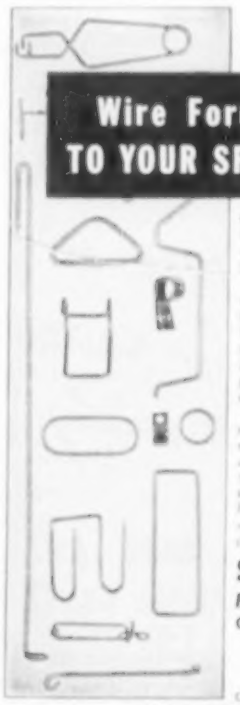
You can transport and stack filled drums *faster* with this latest attachment for E-P fork trucks. By tiering drums *without* pallets, it will *save your space*. Also, this handler is ideal as a *pallet loader*—to assemble drums in multiples upon pallets which are then carried by other fork trucks or on trailers for tractor delivery.

Send For Data on this New Drum Handler.

THE ELWELL-PARKER ELECTRIC CO.
4363 St. Clair Avenue • Cleveland 3, Ohio

▼ BRIEFITT—Identify by IEN - 6947 if you write the maker ▼

▼ BRIEFITT—Identify by IEN - 6948 if you write the maker ▼



Wire Forms Finished TO YOUR SPECIFICATIONS

● Now, Sommer is equipped to handle your wire forms—in a wide variety of attractive finishes.

We have installed fast, automatic nickel-plating equipment for either large or small assemblies. Also, if you want cadmium or zinc plating, bonderized enamel, parkerized or copper-coated finishes—you can count on Sommer.

Complete forming, stamping, or threading and butt welding of light metal parts are also among our services. Whatever your problem, you can save time and money if Sommer handles the *complete* job. Just send sample, blueprint or drawing.

SOMMER METALCRAFT CORPORATION
(Formerly JESCOFF Wire and Specialty Company)
300 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

▼ BRIEFITT—Identify by IEN - 6949 if you write the maker ▼

PRECISION *Control*

by **POWERS**

IMPROVES PRODUCTION • LOWERS COSTS

End losses caused by over and under heating of processes or operations requiring precise control. Install Powers air-operated temperature regulators. Their accurate control helps to improve quality of product and speed up production.

WRITE FOR BULLETIN 270

THE POWERS REGULATOR COMPANY
3737 Greenview Ave. Chicago 14, Ill.
Offices in 50 Cities—59 years of Temperature Control

▼ BREVITY—Identify by IEN-6950 if you write the maker ◄▼

THE FAMOUS MULTIFORM

BENDER CUTTER

Produces Without Special Tooling — Saves Die Costs Saves on Expensive Presses

The illustration at the left shows just a few pieces produced on our famous Multiform Bender Cutter. This efficient machine is useful in all lines of trade.

No. 5 Air Model — FIVE-IN-ONE TOOL
IT BENDS FLAT AND TUBULAR STOCK INTO ANY SHAPE, CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. 907 NORTH PITCHER ST. KALAMAZOO 60F, MICH.

▼ BREVITY—Identify by IEN-6953 if you write the maker ◄▼

WELDING . . Gas shielded arc machine for automatic welding of aluminum

Source: LINDE AIR PRODUCTS CO.
30 E. 42nd St., Room 308, New York 17, N. Y.

Type FSM-1 designates a new argon shielded metal arc welding machine designed to mount on the Oxyweld Type CM-37 carriage for movement over a work surface such as the aluminum car tank shown in the illustration. The machine maintains the arc in a shield of argon gas between a filler electrode and the aluminum being welded. The filler is aluminum wire which is fed from a reel and is deposited in the seam. No flux is required. Welds can be made at speeds as low as 5 ipm. in heavy plate to 48 ipm. in plate ⅛ in. in thickness. Any thickness can be handled with a suitable number of passes.

Basically the machine consists of an electrode feeding mechanism in which speed is controlled by the welding voltage, a gas cup and guide tube assembly to direct the electrode into the weld zone through the gas shield, and a control to hold the arc voltage to plus or minus 1 volt. Also required is a d.c. welding generator of recommended 400-amp. rating. This generator is employed with reverse polarity to obtain the required clean welding action. The company supplies a control for the generator as a part of the primary welding equipment. Welding cables are required to the generator.

▼ BREVITY—Identify by IEN-6956 if you write the maker ◄▼

Custom-Built ★

MOTORS, ACTUATORS ★

FOR YOUR DESIGN REQUIREMENTS

SPECIAL MOTORS . . .
Drip proof, splash proof, totally enclosed, vapor seal, submersible, high and low extremes of operating temperatures.

SPECIAL GEARING . . .
Speed range of 30,000 to 1 R.P.M., helical spur, bevel and planetary type.

COMPLETE POWER PACKAGE UNITS
For A.C. or D.C. power source with magnetic clutches and brakes, built in limit switches, potentiometers, thermal overload relays, radio noise filters, pressure tight shaft seals with linear or rotating power takeoff.

HOOVER POWER UNITS ARE SPECIFIED EQUIPMENT ON THE FASTEST AIRCRAFT FLYING
This 12.5-pound tail stabilizer actuator is designed to withstand an ultimate load of 15,000 pounds, an example of the severe load requirements Hoover power units are called upon to meet.

Whatever your electrical actuation problem, a Hoover unit will do the job. They can be supplied in experimental or production quantities.

HOOVER ELECTRIC COMPANY
2100 South Stoner Avenue • Los Angeles 25, California

▼ BREVITY—Identify by IEN-6951 if you write the maker ◄▼

FOR THOSE *HARD-TO-GLUE* JOBS . . GET A PAISLEY Scientific GLUE!

STEP up your efficiency. Start in now, using Paisley "WOOD-GLU" No. 2145 — a new fast-setting cold bonding liquid resin wood glue. It will do a quicker, easier, better job on a multitude of hard-to-glue combinations where clamp time must be held at a minimum. Paisley "WOOD-GLU" has been time-tested, proven satisfactory for use summer and winter. Household wares, furniture, cabinets, interior doors, frames, and industrial wood gluing and quick repair jobs are aided by this economically priced scientific liquid resin adhesive. Give it a trial in your own shop soon.

TRY PAISLEY "WOOD-GLU" No. 2145

Consider these advantages:

1. READY TO USE
2. FAST SETTING—SAVES CLAMPING TIME
3. EASY TO HANDLE
4. HIGH COLD BONDING STRENGTH
5. NO FOAMING—NO WASTE
6. CLEAN WHITE COLOR
7. WORKS AT ANY TEMPERATURE ABOVE FREEZING
8. LOW COST

MAIL COUPON NOW FOR GENEROUS TRIAL OFFER!

Gentlemen: Please send complete information about Paisley Wood Working Glues.

You may send on approval trial 5 gal. shipment of "WOOD-GLU" No. 2145 at 55 gal. drum price.

Send me a copy of Laboratory Report on "WOOD-GLU".

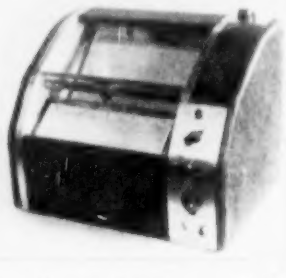
FIRM
STREET CITY
BUYER

PAISLEY PRODUCTS INCORPORATED
Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products
1770 CANALPORT AVE., CHICAGO 16, ILL. • PHONE CANAL 6-2219
630 W. 51st STREET, NEW YORK 19, N. Y. • PHONE COLUMBUS 5-2060

▼ BREVITY—Identify by IEN-6954 if you write the maker ◄▼

TESTING . . Bridge type recorder checks resistors against a standard

Source: BARNES DEVELOPMENT CO.
211-15 W. Baltimore Pike, Lansdowne, Pa.



Measurements that are accurate within ½ per cent are made and recorded on a chart in this new electronic bridge-type equipment for rapid checking of electric resistors rating from 1 ohm to 10 megohms. Terminals are provided for eight potentials and a switch on the control panel applies these as they are required. Following initial setup an inexperienced operator can make the measurements and the chart record by inserting one resistor after another and by pressing a cycle button.

The equipment can be supplied to record a maximum of 100 measurements on its 8½ by 11 in. chart. These hundred readings can be distributed as 50 readings of 2 samples, 20 on 5, 10 on 10, 5 on 20. Operation is on 110-volt 60-cycle ac. Illustrated description covering the instrument and the chart is contained in 4 page Bulletin, "Test Data Recorder".

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 60

▼ BREVITY—Identify by IEN-6957 if you write the maker ◄▼

AEROTEC GAS SCRUBBERS KEEP THE *Big Inch* CLEAN

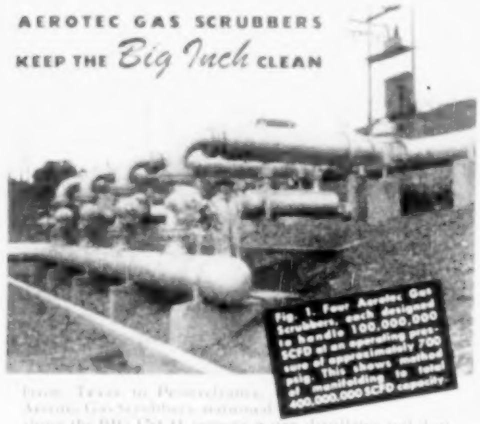


Fig. 1. Four Aerotec Gas Scrubbers, each designed to handle 100,000,000 SCFD at an operating pressure of approximately 700 psig. This shows method of manifolding to total 400,000,000 SCFD capacity.

From Texas to Pennsylvania, ... Aerotec Gas Scrubbers ... along the BIG INCH, remove water, distillates and dust.

Above is the Aerotec installation on the "Big Inch" at Waynesburg, Pa. Installed for Texas Eastern Transmission Corporation, this 400,000,000 SCFD installation is typical of manifolding possible with standard 100,000,000 SCFD units, for increasing capacity.

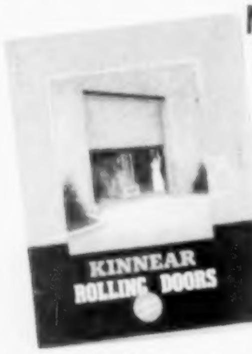
The Aerotec method of separating gas from foreign materials is a dry process. Since no oil or other liquid is used for separation, no carryover of these cleaning mediums into the gas stream is possible. Write for Catalog 501.

Process and Sales Engineers
THE THERMIX CORPORATION
Greenwich, Conn.

THE AEROTEC CORPORATION
GREENWICH, CONN.

▼ BREVITY—Identify by IEN-6955 if you write the maker ◄▼

New, Complete DOOR DATA



Space Saving - Time Saving
DOORS FOR EVERY NEED

Write for FREE catalog today.

Saving Ways in Doorways
KINNEAR ROLLING DOORS

The KINNEAR Mfg. Co.

▼ BREVITY—Identify by IEN-6958 if you write the maker ◄▼

BARKSDALE IS NOW SOLE DISTRIBUTOR FOR

MELETRON
PRESSURE SWITCHES

FAST CYCLING, CONTINUOUS DUTY,
Crescent
ELECTRIC 4-WAY VALVES
FOR AIR, WATER, OR LIGHT OIL

BARKSDALE
"SHEAR-SEAL" HIGH PRESSURE VALVES

For literature and prices address:
BARKSDALE VALVES, 4905 Santa Fe Ave., Los Angeles 58, California

BRIEFITS—Identify by IEN-6959 if you write the maker

This AMP terminal is already insulated!

ONE QUICK STROKE OF A TOOL OR PRESS AND YOUR COMPLETE INSTALLATION JOB IS DONE!

No need to stock terminals and tubing. Cuts costs of materials and labor, speeds production, and improves the quality of connection both electrically and mechanically. Terminal is made of pure copper electroplated for corrosion resistance. Special dielectric plastic sheath cannot slip or be removed. Color coded to wire size ranges from #22 to #10.

AMP AIRCRAFT-MARINE PRODUCTS INC.
1507 N. 4th Street • Harrisburg, Penna.

Canadian Representative: E. M. Hollander Co. Limited, Toronto, Ont., Canada

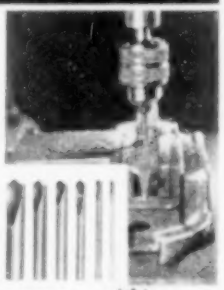
AMP Trade-Mark Reg. U. S. Pat. Office Elgin 5647

BRIEFITS—Identify by IEN-6960 if you write the maker

NOW... DRILL HARDEST STEEL

SOLID FIRTHITE Sintered Carbide **DRILLS**

You can drill holes in Heat-Treated steels (up to RWC-66) with an ordinary drill press.



Firth Sterling STEEL AND CARBIDE CORPORATION McKEESPORT, PENNA.

$36 FOR KIT OF SIX DRILLS

Please send ☐ Firthite Drill Kit IEN

Single Drills

☐ 1/4", $4.00; ☐ 5/16", $4.50; ☐ 3/8", $5.25;
☐ 7/16", $6.60; ☐ 1/2", $9.00; ☐ 9/16", $10.50.

Enclose check, money order or purchase order.
☐ Send more information on Firthite Drill

Name _____

Address _____ City _____

Next to a Diamond in Hardness

BRIEFITS—Identify by IEN-6961 if you write the maker

Elliott Type "A" TWIN STRAINERS

New LARGE BASKETS for a two-way saving

They save time because their larger capacity enables them to operate longer without cleaning out.

The large basket capacity also reduces pressure drop in the passage of the liquid through the strainer.

With Elliott Type A Twin Strainers, the continuous cleaning of any liquid obtains the maximum in economy and low maintenance cost.

Write for Bulletin A-159

Sizes from 1" up—125 to 250 lb. pressures

ELLIOTT COMPANY
Accessories Dept., JEANNETTE, PA.
DISTRICT OFFICES IN PRINCIPAL CITIES

BRIEFITS—Identify by IEN-6962 if you write the maker

TUBE . . Flexible stainless steel for installations subject to corrosion

Source: JOHNSON METAL HOSE INC.
221 Mill St., Waterbury 55, Conn.

Sizes range from 1/4 to 1 1/2, or in double-braided and corrugated sizes, working pressures from 2,000 to 800 lb. in a wide variety of stainless steels. Tube assemblies with plain or braided exterior and stainless steel couplings weld, solder, pressure expand. Can be based on any grade of stainless steel wire braid. Additional layers will increase the safe rating beyond the stated values as required.

Two types carry close-wound and open-wound corrugations. The former for constant flexing or vibration movement, the latter for occasional manipulation and for infrequent flexing. Outside diameters will vary based on 3/8 to 4 3/4 inches. Minimum Bending Radius is 6 to 19 inches.

BRIEFITS—Identify by IEN-6963 if you write the maker

DRIVE . . Linear actuator, motor driven, telescoping housing

Source: AIR ASSOCIATES INC.
49 Bendix St., Teterboro, N. J.

Compactuator finds across new motor-only ground actuator type actuator which is operative in the normal range of 160 cycle, 26 volt and load. Retracted length is 9 3/8 and 12 3/8 inches. Maximum stroke is 3 3/4 and 5 3/8 inches.

One of the assemblies is shown in the illustration in both retracted and extended positions. Each assembly is equipped with limit switches, thermal protector and position indicator. Load takedown and re-assembly require only a screw driver.

BRIEFITS—Identify by IEN-6964 if you write the maker

ISOTOPES . . Wall chart tabulates data on some 1,000 kinds of atoms

General Electric Co.
Dept. 68-251, Schenectady 5, N. Y.

Revised edition of the company's wall chart on the chemical elements and their isotopes is titled "Chart of the Nuclides". It measures 50 by 26 in., is printed on heavy paper. Position and shading of a square on the chart for each element isotope indicates its construction and whether it is stable, naturally radioactive or artificially radioactive. An 8-page explanatory booklet accompanies the chart.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . . See Page 50

BRIEFITS—Identify by IEN-6965 if you write the maker

REALOCK

IS TAMPER-PROOF

Realock Fence gives your plant property tamper proof protection against trespassing, arson, theft and other costly hazards. That's because essential fittings are designed to permit the removal of bolts from the inside only.

Sturdily constructed of steel wire, heavily galvanized, Realock Fence is weather-resistant, extra durable and practically maintenance free. The Wickwire Division will not furnish integral arms as shown, but will substitute a malleable base with pressed steel arms. Write for catalog and free estimate.

Realock Fence

WICKWIRE SPENCER STEEL DIVISION
CALIFORNIA STEEL AVENUE • BUFFALO 5, NEW YORK
THE COLORADO FUEL AND IRON CORP.
CONTINENTAL OIL BUILDING • DENVER 2, COLORADO
THE CALIFORNIA WIRE CLOTH CORP.
1801—19TH AVENUE • OAKLAND 6, CALIFORNIA

BRANCHES & DISTRIBUTORS IN KEY CITIES EVERYWHERE

BRIEFITS—Identify by IEN-6966 if you write the maker

New Answer to Faster Production

Index Table Now Offers Speedy, Automatic Feed For Many Types of Equipment

Hydraulic Pumping Unit Powers Indexing Table

DENISON HydrOil-ics

The DENISON Engineering Co.
1152 Dublin Rd., Columbus 16, Ohio

BRIEFITS—Identify by IEN-6967 if you write the maker

B.F.Goodrich TWAW ANALYSIS PLAN

Studies prove savings can be made in 2 out of 3 cases. Proper tire maintenance alone can cut costs up to 20%

CUT tire & wheel costs up to 50%

Here's how you can save up to half of your materials handling and industrial handling tire and wheel costs. The TW Analysis determines correct type and size of tire, correct tread design, correct tread rubber compounds *and applies all correct factors to the specific job.*

Here's how it works—A man trained in materials handling problems will survey your operation, study loads, hauls, handling equipment, floors and handling surfaces, also any special problems you may have. On completion of this survey the BFG man, without charge or obligation on your part, will recommend the best type and size tires and wheels for your particular service, including suggestions on tire care and maintenance.

Here's why BFG can be impartial—No other company offers the wide range of types or sizes of tires and tread compounds as B. F. Goodrich. Your BFG man has no axe to grind, for company "makes 'em all"... his advice is impartial!

14 types of tires 6 different tread compounds!

BFG's complete line of industrial tires includes pneumatics, puncture-sealing inner-tubes, solids (all types) and Zero-Pressure semi-pneumatics. There's a wide choice of tread designs and a choice between 6 different tread rubber compounds including the famous oil-proof compound.

The B. F. Goodrich Co.
Department TW-56
Akron, Ohio

Please give me additional information on your new Tire and Wheel Analysis plan

Name _____
Title _____
Company _____
City _____ State _____

Mail the coupon for full details at no obligation. A SIMILAR PROGRAM IS NOW READY FOR MANUFACTURERS OF INDUSTRIAL HAULING EQUIPMENT

▼ BREEZE—Identify by IEN - 6969 if you write the maker ▼

ELECTRIC and ELECTRIC-EYE COUNTING

JUST OFF THE PRESS—Bright illustrated bulletin. Describes Modern Methods of Count Controlling Production, Packaging, Delivery, Batch Counting; Remote Production Counting. Send for your copy.

Tremendous aid to improved efficiency

WIZARD Electric Counters count anything that will operate a switch, photo-electric unit, or other circuit-breaking device. You can locate them at any distance from the actual source of count. Operations thruout the plant can be counted in Production Office.

Models for every purpose. Just tell us what you want to do.

Production Instrument Company
700-10 W. JACKSON BLVD., CHICAGO 6, ILL.

Representatives in Principal Cities

▼ BREEZE—Identify by IEN - 6970 if you write the maker ▼

"A penny saved is two pence clear."

In days when venture capital comes out forth, cutting costs in the shop gives money back into the business.

Mr. Plant Manager: You know that new machines, new methods can help you cut costs on the production line.

But are you overlooking opportunities to save in your shipping room, in your packaging and materials handling operations?

Most companies can find plenty of new ways to more efficiency and greater thrift, when an Acme sales engineer suggests them. In 9 out of 10 cases, we can help you benefit with Acme Methods and Acme flat steel strapping, Acme stitching machines and wire, and other Acme Steel products.

More than 50,000 Acme customers now enjoy these benefits. Why don't you? It won't take long to find out. Just pick up your phone and call the Acme Steel service office nearest you. There are 46 of these offices in the principal cities of the U.S. and Canada. Or send the coupon for detailed case studies of savings in your own particular field.

ACME STEEL

ATTACH THIS COUPON TO YOUR BUSINESS LETTERHEAD

ACME STEEL COMPANY, Dept. IEN-6970
2840 Archer Avenue, Chicago 8, Illinois

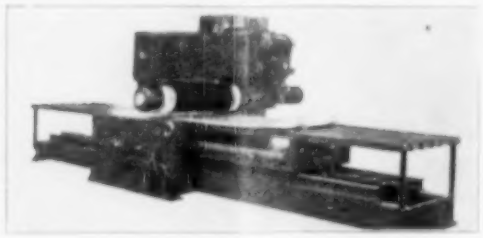
Please forward copy(ies) of:
☐ Product Assembly
☐ Packaging, Shipping, Materials Handling
☐ Shipping Carload and C.L.
☐ Box and Box Assembly

Name
Position
Company
Address
City Zone State

▼ BREEZE—Identify by IEN - 6972 if you write the maker ▼

POLISHING . . Brush type machine takes 18 in. brush or buffing roll

Source: HILL ACME CO.
4533-37 St. Clair Ave., Cleveland 14, Ohio



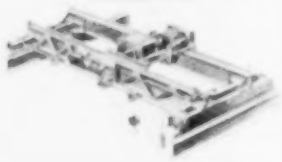
Sheets of steel or non-ferrous metal are clamped at one end on the reciprocating carriage of this new machine to pass under a motor-driven decorating brush or buffing roll. The action cleans and polishes the sheet surface. Width capacity is 48 inches. The machine is available in carriage width to 72 in. and length to 8 feet.

The carriage is reciprocated by hydraulic pressure and rides upon bearings beneath a top work supporting table assembly of rails that does not move. These rails support the sheet at the extremes of travel and provide a work handling surface. The brush or roll is oscillated axially as it revolves to prevent visible grooves in the work. Main drive is by a 50 to 100 hp. motor. Oscillation, at through ½ to 2 in., is a range of 50 to 150 cycles per min. by a 3-hp. motor. Self contained hydraulic equipment is built into the machine base.

▼ BREEZE—Identify by IEN - 6973 if you write the maker ▼

CRANE . . Traveling bridge design standardized parts, rating to 12 ton

Source: WHITING CORP.
15629 S. Lathrop Ave., Harvey, Ill.



Type K designates new line of traveling cranes characterized by parts standardization to permit assembly of a range of sizes from stock and thus minimize first cost. The crane is available for hand or power travel of the carriage and bridge. The power-operated design can be supplied for control from the floor at a pushbutton station or with an operator's cab. The power assembly also features hydraulic couplings in the bridge and carriage travel, to absorb shock.

Sizes from 2 to 7½ ton are available for spans from 20 to 60 feet. The 2 ton unit can be supplied with lift height at 17 to 47 ft. and lift speed at 20, 30 or 40 fpm. The 7½ ton crane is made with 20, 30 or 41 ft. lift at 8, 12 or 18 fpm. Spans from 20 to 55 ft. is available in the 10-ton crane with lift height at 20 to 41 ft. and speed at 8, 12 or 18 fpm. The 12 ton crane has maximum span at 50 ft., lift height of 17 to 35 ft. and speed of 8 to 18 fpm. Bridge travel by power is 170 fpm. when floor controlled, 250 fpm. when cab controlled. Carriage travel is 100 fpm. to 5 ton, 125 fpm. from 7½ to 12 ton.

Catalog Section 300, Unit 75, 20 pages, illustration, details, provides specifications and dimensions.

All Makers of These And All Other Products Are Listed in THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 30

▼ BREEZE—Identify by IEN - 6974 if you write the maker ▼

Stripe Aisles for GREATER SAFETY

New M-B Electric or Gas Driven 5-S MARKER

Save with time and money striping your factory aisles with this new M-B MARKER. As simple to operate as any spray gun. Reduces a one-hour handpainting job to twelve minutes. Lays down clean-cut, long lasting lines. Paints to within inches of walls or side obstructions. Marks smooth or rough surfaces.

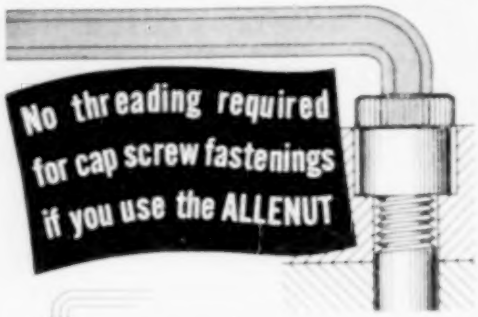
Automatic relief valve assures complete safety. Eliminates need for making adjustments. No gauges, regulators or superfluous pipe fittings. Quickly converts to an all-purpose paint sprayer. Machine is easy to clean after job is finished. Write for new M-B Marker Bulletin.

M-B . . Marker with "5-S" Air Gun. Unique Compact Lightweight.

MEGH-BLUNDERED CORPORATION
BOX 155, NEW LOCATION, WISCONSIN, U. S. A.

INDUSTRIAL MARKER

▼ BREEZE—Identify by IEN - 6975 if you write the maker ▼



No threading required for cap screw fastenings if you use the ALLENUT

FITS DRILLED HOLE . . knurled flutes engage counterbore and are self anchoring in non hardened materials. Positive wrenching for extra tight set-up in hardened metals.

This end threaded to class 3 fit to receive screw.
This end a double hex socket to take standard key.
Easy removal, ready reuse.

The simple way to repair stripped threads on existing work. The economical practical method for your new product design.

SOLD ONLY THROUGH LEADING DISTRIBUTORS

Write the factory direct for literature or technical data.

ALLEN ALLEN HEAD
MANUFACTURING COMPANY
Hartford 2, Connecticut, U. S. A.

▼ BREEZE—Identify by IEN - 6976 if you write the maker ▼

HIGH VACUUM PUMPS for CONTINUOUS SERVICE

WHERE hard, continuous service is an important production factor, to name just a few examples, Stokes High Vacuum MICROVAC Pumps prove a profitable investment.

Stokes MICROVAC Pumps form high volumetric efficiency . . low power consumption . . long wear . . low up-keep and maintenance costs . . simple design . . easy installation.

F. J. STOKES MACHINE COMPANY 5528 TABOR ROAD, PHILADELPHIA 20, PA.

FJS

F.J.STOKES MACHINE COMPANY

▼ BREEZE—Identify by IEN - 6977 if you write the maker ▼

CAST SPECIAL SHAPES QUICKLY . . . EASILY

. . . *with these* FIRECRETE Castable Refractories

Special shapes or linings of Firecrete are flexible and are ready for service within 24 hours. Other advantages—no drying shrinkage, negligible firing shrinkage, high resistance to spalling, can be used in combination.

3X Firecrete . . Ultra-fine material making smooth-surfaced castings, through hinges, tile, and industrial plastics.

H-T Firecrete . . A high-alumina material made from bauxite, especially for temperatures from 1500 to 3000 F. For service between 2400 F. and 2800 F.

Standard Firecrete . . The most generally applicable type of Firecrete, but can be used Firecrete-formed shapes or linings similar to 3X.

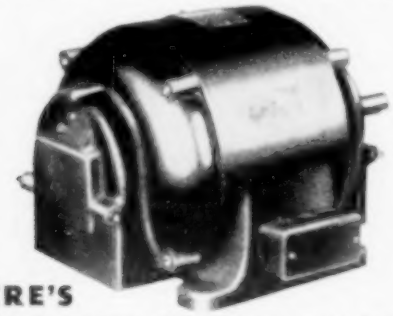
L-W Firecrete . . A lightweight material with a low-cement content, low heat content, uniform and high resistance to spalling.

For patching and gunning, use 3X BLAZECRETE. Has an unusual adherence quotient. Can be flipped into place with a trowel without cramming or tamping. For use to 3000 F. For further information, write to Johns-Manville, Box 290, New York 16, N. Y.

JM

Johns-Manville FIRECRETE
"The Standard in Castables"

BREVITY—Identify by IEN - 6978 if you write the maker



HERE'S MOTOR EXPERIENCE THAT CAN BE *yours*

● A high percentage of all Peerless Motors are manufactured to meet the specific operating requirements of the equipment with which they are to be used. Answering these motor problems has given Peerless engineers an experience that can be yours when you call Peerless for advice on motor applications.

You will save time, energy and money by turning your motor problems over to Peerless. Call on us by telegram or telephone. Increased engineering and production facilities can be put to work for you promptly.

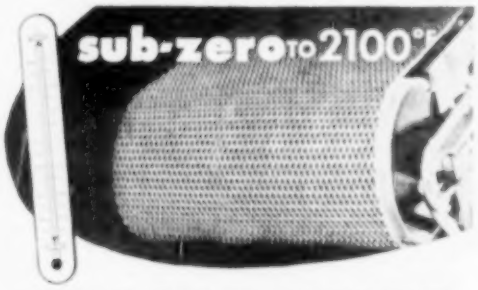
THE PEERLESS ELECTRIC COMPANY • WARREN, OHIO

Manufacturers of Quality Motors for more than 55 years

Single Phase • Polyphase • Direct Current Motors

Peerless-Electric MOTORS-FANS-BLOWERS

BREVITY—Identify by IEN - 6979 if you write the maker



WISSCO BELTS

"TAKE IT" IN STRIDE—Wissco Metal Processing Belts have established an enviable record for long, dependable service under the punishing effects of temperature extremes, abrasion and corrosion. Their patented mesh construction permits free air circulation for uniform heat treatment, provides free drainage for washing, quenching or oil grooving.

Whether it's foodstuffs, metals, glass or ceramics, Wissco Belts carry the product safely, assure more efficient production, lower handling costs.

Write for booklet describing the adaptability of Wissco Belts.

WISSCO METAL CONVEYOR BELTS
A PRODUCT OF WICKWIRE SPENCER STEEL DIVISION OF THE COLORADO FUEL AND IRON CORPORATION

Sales Office and Plant—56 Sterling Street, Clinton, Massachusetts
General Office—500 Fifth Avenue, New York 18, N. Y.
Sales Offices—Atlanta • Boston • Buffalo • Chicago • Denver • Detroit • New York • Philadelphia
Pacific Coast—The California Wire Cloth Corporation, Oakland 6, California

BREVITY—Identify by IEN - 6980 if you write the maker

10 TIMES HIGHER ABRASION RESISTANCE

(standard abrasion wheel test)

SURETY SURESEAL SYNTHETIC RUBBER industrial gloves

PLUS

Sureseal Synthetic's higher snag and chemical resistance means safer, longer-wearing gloves—much lower glove costs.

Standard tests show that Sureseal Gloves are miles ahead on all counts—besides higher abrasion resistance, Sureseal Synthetic Rubber has 4 times higher snag resistance, much higher chemical resistance than either natural rubber or standard synthetics.

Get more hand protection for less money in your plant—ask your distributor about Surety Sureseal Gloves, or write direct.

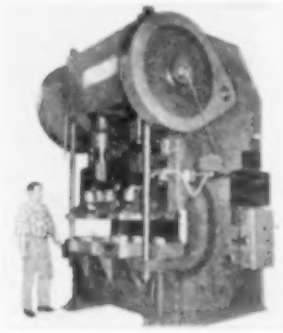
THE SURETY RUBBER CO. DEPT. I

In Canada: SAFETY SUPPLY COMPANY, Toronto, Ontario

BREVITY—Identify by IEN - 6981 if you write the maker

PRESS . . Motor driven machine for blanking operations rates 300 ton

Source: CLEVELAND CRANE & ENGINEERING CO.
1137 E. 283rd St., Wickliffe, Ohio



Model K4-1 is a special assembly of the company's Stationed blanking press in a new application. It blank work such as clutch rings, gear parts in clutch plates calling for press capacity to 300 tons. Operation is at 22 strokes per minute. Shut height is 18 inches. Throat depth is 18 inches. The bed measures 2 ft. from to back, 4 ft. between the uprights.

Two sets of control buttons are supplied for two-man operation. Both sets must be depressed to make a hit. Releasing either set stops further action. Power is through an air-electric clutch and a monitor switch. The latter can be set for long stroke, short stroke, continuous action and locking action.

BREVITY—Identify by IEN - 6982 if you write the maker

GRINDING . . Motor driven head also for milling, to mount in machine

Source: PRECISE PRODUCTS CO.
1326 Clark St., Racine 1, Wis.

Note additions to previous item

The company has asked that we emphasize the fact that its Super-50 tool is illustrated in our previous description, IEN-4505-50, covering both the Super-40 and Super-50 designs. We also have additional information that the Super-50 housing is machined to facilitate mounting.

BREVITY—Identify by IEN - 6983 if you write the maker

ALUMINUM . . Extruded ribbed sheet starts as cylinder, then is opened flat

Source: REYNOLDS METALS CO.
2502 S. 3rd St., Louisville 1, Ky.

An aluminum sheet with integral reinforcing ribs has been produced in an initial development by the company to provide a light-weight structural material with high degree of rigidity particularly for aircraft. To date a 9-in. diameter has been extruded with a 10-in. die opening to wind up as a straightened sheet measuring 27 to 28 in. in width.

Sheet thickness is .04 in. and the alloy is No. 758. The company invites contact with manufacturers interested in working with the new material and in developing applications.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 50

BREVITY—Identify by IEN - 6984 if you write the maker

for ANODIZING ALUMINUM *process*

Newly developed Tank gives

3 YEARS SERVICE!

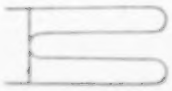
VALUABLE SAVING IN TIME—OPERATION—PRODUCTION

Especially designed for anodizing. The New Langsenkamp anodizing tank gives you at least 3 full years of service under normal operations.

Langsenkamp anodizing tanks are reinforced within themselves. Bracing is kept to a minimum—galvanic action prevented.

Available in all sizes, in stainless steel, aluminum or copper. Lead lining when desired. Reasonably priced.

TUMBLER RACKS—GIVE 50% MORE SERVICE



You can save more money by using Langsenkamp Tumbler Racks. Langsenkamp Welded Tumbler Racks eliminate poor conductivity, increasing rack service 50%.

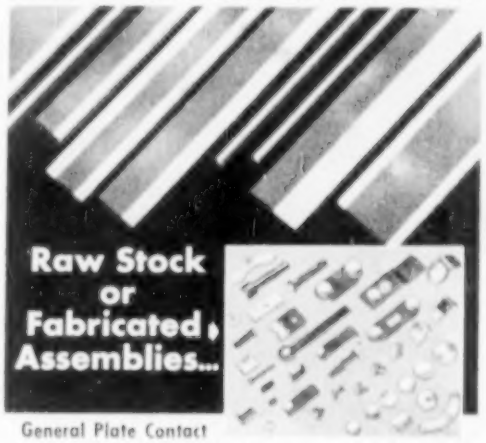
Will hold 18 Tumblers. Designed for use in anodizing tanks 18" wide by 42" deep. For full details write.

F. H. LANGSENKAMP COMPANY
229-235 East South Street Indianapolis 25, Ind.

BREVITY—Identify by IEN - 6985 if you write the maker

AMERICAN-FORT PITT SPRING
Division of H. K. Porter Company, Inc.
2 John St., McKees Rocks, Pennsylvania

BREVITY—Identify by IEN - 6986 if you write the maker



General Plate Contact
Materials Save Costs, Improve Product Performance

The big advantage of General Plate Contact materials is that they give a much better performance at a fraction of the cost of solid silver. Write today. General Plate experiments furnish a wide of silver or suitable contact base metal. Also providing a contact face of high electrical conductivity.

General Plate Contacts are ready for use. Any form you fabricate is available with silver bonded to base metal in various combinations, circular, single or double inlay, single or double clad and clad-inlay strips.

General Plate contacts and fabricated assemblies are made to exact specifications. Laminated contact buttons, rivets and wire tips contacts are also available.

GENERAL PLATE
Division of Metals and Controls Corporation
707 FOREST STREET, ATTLEBORO, MASS.

BREVITY—Identify by IEN - 6987 if you write the maker

SAVE HOURS ON YOUR MAINTENANCE AND REPAIR WORK WITH

BAKER SCAFFOLDS

● Baker Scaffolds offer the speed and complete portability so necessary for industrial use . . . there is less time wasted in assembly and disassembly.

Their one "I know" combination allows them to span machinery, pick jobs, and furniture. The completely adjustable platform places the man at the proper height to do the job efficiently. Baker Scaffolds are quickly stacked for height and easily handled by one man—on ordinary elevators and through standard doorways. Write today for Bulletin 457.

Distributors Throughout Cities
Local order Representative listed in Yellow Pages
Industrial Equipment, Inc.

BAKER-ROOS, INC.
602 W. McCARTY STREET
INDIANAPOLIS 6, INDIANA

BREEZE—Identify by IEN-6988 if you write the maker

- Cut Greasing Time!
- Keep Lubricants Clean!
- Build 3300 lbs. Pressure Instantly!

Air or electric operated, these Alemite 25-lb. capacity power guns handle all types of pressure gun greases that seek their own level. Ideal for use wherever hand methods are impractical. Electric gun equipped with 110 V. Universal motor.

WRITE for free catalogue.

ALEMITE

Industrial Lubrication Equipment

Dept. K-70, 1850 Diversey Parkway
Chicago 14, Illinois

BREEZE—Identify by IEN-6989 if you write the maker

Chase out bad air and fumes and smoke with *Powerful*

VALVENT Roof Ventilator

Excellent for all "hot spots" in your buildings. Efficient air-flow design—pleasing appearance. Unusually effective propeller fan unit. Wide selection of sizes, capacities. Write for Bulletin 1470.

18311 Euclid Avenue, Cleveland 12, Ohio

The Swartwout Co.

Industrial Ventilation Specialists Since 1904

Equipment for *Controlled* Air Circulation

BREEZE—Identify by IEN-6990 if you write the maker

BRAINS of any air system . . . Schrader Pilot Valves

- they carry through a cycle once they're actuated
- they can be operated by remote control
- they can be timed to deliver air for a predetermined number of seconds
- they deliver line pressure to the point of operation
- they pay for themselves many times over

Schrader Pilot Valves are built in four sizes—¼", ⅜", ½" and 1¼"—and in several types for 3-way, with or without times.

Novel Pilot Valve Applications Stress Economy. Do you use open feedlines? Then we can show you how pilot valves can be applied to start to control water circulation and save water. Some installations now saving thousands of gallons daily. Consult our engineers.

Write for complete information and literature on Schrader Pilot Valves and Air Cylinders. For data on hundreds of other Schrader Products—Press Controls, Air Emergency Sets, Air Line Couplings, etc.—write for 72 Page Catalog.

Schrader PRODUCTS CONTROL EQUIPT.

A. SCHRADER'S SON

476 Vanderbilt Ave., Brooklyn 17, N. Y. Dept. IN-6

Division of Scovill Manufacturing Company, Incorporated

BREEZE—Identify by IEN-6991 if you write the maker

CONTROL . . Mercury actuation for pneumatic temperature control

Source: TAYLOR INSTRUMENT COS.
59 Ames St., Rochester 1, N. Y.

Temperature sensing, 200 and 1200 deg. F., can be measured and employed to operate a mercury-filled Bourdon tube and a screw as the actuating element for indicating, recording, controlling in one of the company's standard instruments. Range spans of 400 deg. and 1000 deg. F. or the equivalent Centigrade are available. Typical applications are in controlled ovens, glass annealing ovens, high temperature benches, and to measure exhaust gas temperature.

The thermal element connecting at the end of the tube leading to the Bourdon is Type 347 stainless steel. It is ¾ in. in diameter. Its length depends on the range span selected. The tubing is 18-8 stainless steel of the company's Accuratube line. The Bourdon tube or spring is a new small design requiring about one-half the normal volume change previously needed to move the pointer a given distance.

BREEZE—Identify by IEN-6992 if you write the maker

CUTTING . . Tool for plastics, electrically heated, will also seal

Source: STA-WARM ELECTRIC CO.
560 N. Chestnut St., Ravenna, Ohio

Cutting wheel and sealing roller are interchangeable in the new electrically heated tool. It is known as Catalog 6240 for cutting and as 6241 for sealing. Operation is on 110 volt AC. A thermostat adjusts input to hold a desired temperature. The tool is particularly suited to cut and to heat-seal sheets plastic fabrics as well as to work on cellophane sheet. Sealing roller width range from ⅛ to ½ inch. Tool weight is about 1½ pounds. The heating element can be changed in the field.

BREEZE—Identify by IEN-6993 if you write the maker

PLANT SAFETY . . Monthly house paper reminds employees of what safety means to them

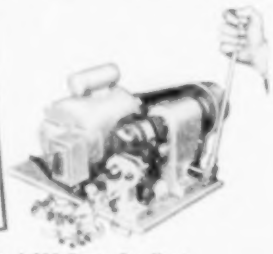
Source: A. Boehling's Sons Co.
612 S. Broad St., Trenton 2, N. J.

Each employee receives a copy of "On Guard" six times a year to remind him of safe practices, to show him how safety clothing and equipment have protected other men on the job, to point out that safety extends off the job as well as on. A copy of The 9 by 12 in. two-page contact issue will be sent on request so you can see how safe of a handbook.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 50

BREEZE—Identify by IEN-6994 if you write the maker

New PINES Tube & Rod END-FINISHING MACHINE *SPEEDS* WORK OUTPUT



Completes 500 to 1,000 Pieces Per Hour

A broad range of rod finishing operations can now be handled with speed and precision on this new Pines Semi-Type rod finishing machine. It combines a new type mechanism of three-jaw chucking mechanism that "fits production runs." Jaws are so angled that overhanging work may be handled as accessories are long—or short.

3 Operations in 1 Motion of Handle

One movement of the operating handle quickly engages the workpiece, removes the stock strip, and brings the chuck to the work. Release of the handle returns the chuck to its original position and automatically ejects the piece. Thus, with one hand for loading the machine, an operator can speed work output.

For long-run work, there's a fully automatic Pines Model with feed control to keep you cases additional hours. Models up to 3" capacity are now available.

Write for free bulletin

Our new bulletin on the new time-saving production rod end finisher will help you save time on your work.

Profitable Uses
- Deburring
- Finish one flat side (chamfering)
- Facing
- Center drilling
- Drilling
- Reaming
- Single Point Boring
- Light Forming
- Turning

Brief Specifications
Capacity: Up to 3" diameter (or equivalent)
Chucks: 3 adjustable
Motor: ½ hp. with [illegible]
Weight: 175 lbs.

PINES ENGINEERING CO., INC.
Specialists in The Industry Equipment
[illegible] Street, Aurora, Illinois

BREEZE—Identify by IEN-6995 if you write the maker

Save VALUABLE MINUTES COSTLY TOOLS

APPLETON *Retract-o-Reel*

Appleton Retract-O-Reels eliminate lost motion, save time and money, on production lines where small tools are employed. Drills, screwdrivers and other electrical or air-operated equipment are supported in exact position for easy reach.

Appleton Retract-O-Reels pay double dividends under assembly production stations. Send today for descriptive bulletin.

APPLETON ELECTRIC COMPANY
1756 Wellington Ave., Chicago 13, Ill.
Branch Offices and Resident Representatives in All Principal Markets

APPLETON

CONDUIT FITTINGS · LIGHTING EQUIPMENT · OUTLET AND SWITCH BOXES
EXPLOSION-PROOF FITTINGS · SERLITES

BREEZE—Identify by IEN-6996 if you write the maker

LOSTRO SAVE TIME, MONEY AND LABOR

MINUTE OIL CHANGER

SUPER-SPEED ACTION. New, powerful vane type, self-priming pump takes out old oil or compounds at rate of almost 2 gallons per minute.

EASY TO OPERATE. Simply insert tube in dip stick opening, or reservoir and press trigger.

HIGHLY EFFICIENT

COMPACT SIZE

Operates on 110 volt AC or DC

Weighs only 3 lbs. Easily carried to machines

NEW LOW PRICE $49.50

Complete with 3 interchangeable steel tubes

LOSTRO, INC.
NEWTOWN, CINCINNATI, OHIO

☐ Ship . . . Extra Minute Oil Changers @ $49.50 each, F. O. B. Cincinnati.

☐ Send further information.

Name

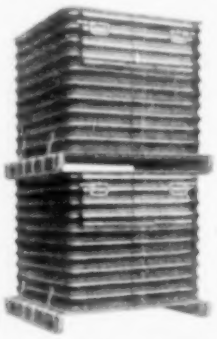
Company

Address

BREEZE—Identify by IEN-6997 if you write the maker

ANOTHER TIME-SAVING COST-CUTTING ALL-STEEL MATERIALS HANDLING BOX DESIGNED AND BUILT BY POWELL

Materials handling jobs require individual attention. Powell specializes in special as well as standardized equipment. The pictured Hinged End Door Box Platform was recently delivered to a customer who wanted a stacking box that was easy to work out of even when stacked. The box had to be easy to get to with fork lift trucks yet, to facilitate tiering, have a minimum fork space. Powell met every requirement satisfactorily.



POWELL PRESSED STEEL

SINCE 1920

The Powell Pressed Steel Company
Dept. 67, HUBBARD, OHIO
(In Greater Youngstown)

Powell designs and builds all kinds of materials handling containers from any metal. If you are not certain how to handling your products economically—call in Powell—originator of cold formed steel materials handling equipment.

Bulletin 700 indicates Powell versatility in creating special equipment. Write for it.

▼ REFER TO—Identify by IEN - 6998 if you write the maker ▼

SUPER-SPACER

for quick, accurate indexing and exact location of work.

Saves expensive setup time on short or long runs. Ideal for milling, drilling, grinding, planing, slotting, and other operations. Pays for itself over and over. Write for information now!

HARTFORD *Special*

THE HARTFORD SPECIAL MACHINERY CO.
HARTFORD 5, CONN.

▼ REFER TO—Identify by IEN - 6999 if you write the maker ▼

Here's the Answer to BULK MATERIAL HANDLING PROBLEMS

Phillips "Skid-Dump"

Bulk materials of all kinds are handled with maximum efficiency at minimum cost . . . with the Model F-1 "Skid-Dump". Used with pallet or fork lift truck, it automatically dumps and returns to original position. Smooth, rolled edges of 3/16" steel plate, welded undercarriage provide safety, long-life, strength and durability. Capacity—1 cu. yd.

Write for Bulletin E-15

New Safety Lock

MANUFACTURERS SINCE 1911 **PHILLIPS** PITTSBURGH PA.

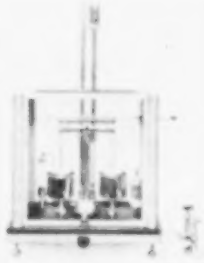
MATERIALS HANDLING EQUIPMENT

2300 JANE STREET · PITTSBURGH 3, PA.

▼ REFER TO—Identify by IEN - 7001 if you write the maker ▼

TESTING . . Laboratory balance reads specific gravity of gas sample

Source: AMERICAN RECORDING CHART CO.
3111 E. 11th St., Los Angeles 23, Calif.



Operating principle of the new Arnot-Ainslie gas balance is based on determining the comparative weight of a volume of air and an equal volume of a sample of gas. Feature is the small amount of gas required and minimum of air used for a complete or gas vacuum pump. The assembly includes an air dryer and means to correct for temperature and barometric pressure.

Capacity range is between .5 and 1.5 in normal operation, 0 to 2.5 when additional weights are employed. Normal weighing to obtain the reading is by moving riders on the balance beam. Illustrated detail information is contained in new Spiggs Bulletin 101.

▼ REFER TO—Identify by IEN - 7002 if you write the maker ▼

PLASTIC . . Rubber base material sheet, rod, tube, blanks, parts

Source: UNITED STATES RUBBER CO.
1230-32 Sixth Ave., New York 20, N. Y.

Particularly suited for machine gears

Fiorup trade names new thermosetting plastic that can be produced to flexibility ranging between soft elastic and hard brittle rubber. It is a high-strength material resistant to abrasion and to chemical attack. It is tough, light in weight and stable at high temperatures. It is resistant to attack by oil, acids, solvents, mild alkalis. It has high dielectric strength, is resistant to burning.

The plastic can be molded in complex shapes by compression and transfer equipment. Applications include pump parts for fuel oil, battery cases, buckets to handle chemicals, plating barrels, filter plates, tube boxes, electrical insulators, valve seats, gears, bearings, bushings.

▼ REFER TO—Identify by IEN - 7003 if you write the maker ▼

SWITCH . . Sensitive snap acting, rating is to 15 amp. on 110 volt ac.

Source: COMAR ELECTRIC CO.
3148 N. Washtenaw Ave., Chicago 18, Ill.

Spring steel is employed in the operating blade of this new snap-acting switch. It can be supplied to operate at various specified pressures. The switch is available in single-pole, single-throw or double-throw assembly. It measures 2⅛ by ⅝ by ⅝ inch. Weight is about one ounce.

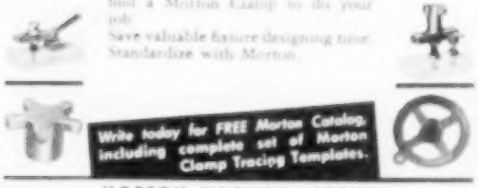
All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . . Ratings . . . See Page 50

▼ REFER TO—Identify by IEN - 7004 if you write the maker ▼

TWO WAYS WE CAN HELP YOU!

1. Cut your Designing Cost
2. Cut your Tooling Cost

1. A complete set of Tracing Templates is available on Morton Standardized Fixture Details. Select the Clamp that fits your need . . . trace it into your design.
2. Largest assortment of Clamps in the business. You'll find a Morton Clamp to do your job.
Save valuable fixture designing time. Standardize with Morton.



Write today for FREE Morton Catalog, including complete set of Morton Clamp Tracing Templates.

MORTON MACHINE WORKS
2421 Walcott St. Detroit 20, Michigan

MORTON
"Get More with Morton"

Fixture Clamps
and Standard Fixture Details

▼ REFER TO—Identify by IEN - 7005 if you write the maker ▼

PORTABLE
QUINCY COMPRESSORS
FROM 1 TO 90 C.F.M.

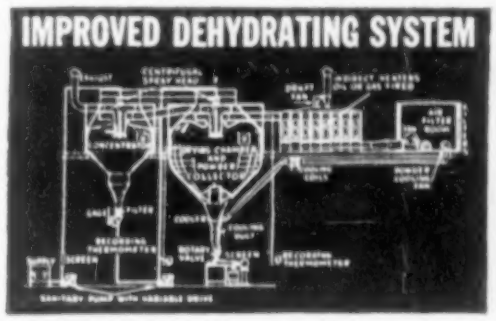
Portable mobile supply of compressed air at any place on the job, ready to accommodate Quincy Portable Compressors. Select from the Quincy line of portable . . . long lines of dependable portable units at minimum initial cost. Low operating and upkeep costs. Write for FREE literature and price lists.

Quincy COMPRESSORS

QUINCY COMPRESSOR CO. Dept H-70 QUINCY, ILLINOIS

▼ REFER TO—Identify by IEN - 7006 if you write the maker ▼

IMPROVED DEHYDRATING SYSTEM



Centrifugal Spray Dryer and Concentrator

For Dehydrating
- Chemicals
- Pharmaceuticals
- Blood or Blood Plasma
- Milk Products
- Eggs
- Vegetables
- Coffee and many other Products

● A complete spray drying plant employing a unique centrifugal type spray head. No high-pressure pump is used, and due to the design of the spray head, emulsions as well as solutions can be dried. No clogging or wearing of nozzles is caused by the suspended solids. The powder is collected and cooled in the drying chamber.

Concentrator can be operated as a separate unit for collecting heavy products to almost any desired degree of concentration, almost instantaneously, retaining natural flavors and vitamins.

WRITE FOR FREE BOOKLET

Attractive bulletin illustrates and describes spray drying plants, explains operation in detail. Shows plant sizes, application photos. Send for your FREE copy today.

DRYING & CONCENTRATING CO., 332 S. Michigan Ave., Chicago, Ill.

▼ REFER TO—Identify by IEN - 7007 if you write the maker ▼

FREE FOR YOU

this fact-filled booklet on better ways to package your product

A handy reference manual prepared for you by the makers of KIMPAK® creped wadding. The work of technical experts, skilled engineers. Gives you the latest, safest methods of avoiding damage to products in shipment. Use it—and watch your profits rise! ®T. M. Reg. U. S. and Can. Pat. Off.

SIMPLY MAIL THIS COUPON

Kimberly-Clark Corporation,
Creped Wadding Division,
Neenah, Wisconsin, U. S. A. IES-7/50

Please send me the free KIMPAK booklet on better ways to package our product.

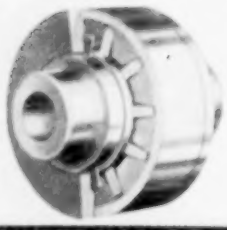
Name _____
Firm _____
Address _____
City, Zone, State _____

BREVITY—Identify by IEN - 7008 if you write the maker

KUSHION-TORK
WHAT IT WILL DO FOR YOU

The Cushion Torque of Kanti-Lever Couplings absorbs the harmful blows of sudden or reversing loads and dampens the torsional and radial vibration that cause wear, fatigue and sometimes failure of Motors, Speed Reducers, Ball Bearings, and productive machinery. No other coupling is like the Kanti-Lever. It has a circular series of Interrelated Cantilevers of 200,000 lb. steel operating in shear, the tapered sides of which automatically stiffen the Cantilevers under increased overloads. Special end-play up to four inches is possible without end thrust. The outer periphery of the Kanti-Lever is available as a brake drum for quick stopping or reversing machinery.

Send for Bulletin No. 28-14



Kanti-Lever Couplings

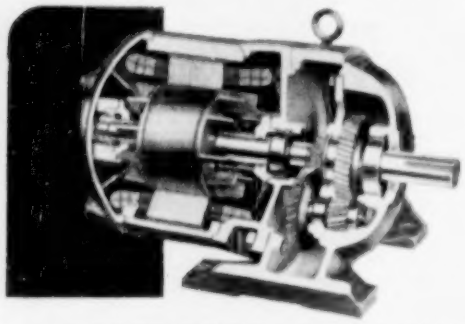
4,000,000 h. p. in Use

MFGRS. OF SECTIONAL STOCK RACKS

BROWN ENGINEERING CO.

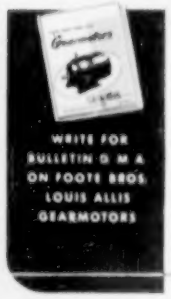
122 NORTH 3rd ST. READING, PENNA.

BREVITY—Identify by IEN - 7009 if you write the maker



FOOTE BROS.–LOUIS ALLIS

Gearmotors



WRITE FOR BULLETIN G M A ON FOOTE BROS. LOUIS ALLIS GEARMOTORS

. . . offer new compactness in design — improved efficiency in operation — longer life. Available in single, double and triple reductions.

Compact in design with sturdy cast housings. Precision helical gears have file-hard tooth surfaces and tough, resilient cores, giving long wear life and maximum load carrying capacity.

Foote Bros. Gear and Machine Corporation
Dept. IEN, 4545 N. Western Blvd.
Chicago 9, Illinois

FOOTE BROS.

BREVITY—Identify by IEN - 7010 if you write the maker

Corrosion Stops HERE

When You Specify SUPERIOR Fine Small Tubing

The photomicrograph above shows one of many reasons why Superior tubing is a better buy when your problem is corrosion. The finish of a Superior tube is always bright, clean, free from corrosion inviting pre-made and set.

We could draw small metal tubing in many analysis to meet more corrosion media and conditions. Stainless steels, nickel-based alloys, and brass-base copper accounts of the corrosion resistant metals in which we "custom make" small tubing to your specifications. Every Superior tube is accurately dimensioned to close tolerances, properly temper to suit your working conditions and is available in any length or random lengths. Diameters from .0187 to .688" O.D. (up to 1/2" on certain analysis). For more information write for Bulletin 13.

Superior

THE BIG NAME IN SMALL TUBING

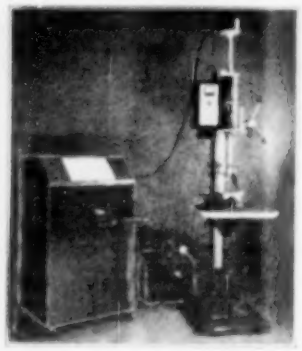
SUPERIOR TUBE COMPANY • 2016 Germantown Ave., Norristown, Pa.

West Coast: Pacific Tube Company, 5710 Gaffney Street, Los Angeles 22, California—Angelus 2-2151

BREVITY—Identify by IEN - 7011 if you write the maker

DRILLING . . Metal disintegrator for hardened steel, Stellite, carbides

Source: ELOX CORP.
738-42 N. Rochester Road, Clawson, Mich.



New design of the company's metal-disintegrating equipment previously described IEN-4518-44 for extraction of broken drills and taps, is able to penetrate hard metals at considerable speed as in drilling. Based on the use of a 5/8-in. electrode a hole can be put 1 in. into hardened steel in 140 seconds, or through a 1/4 in. depth in 25 seconds. Operation is on 110-volt 60-cycle ac. Input is 2 kva. Electrode diameter range is .040 to 3/8 inch. Electron Drill is the designation.

Copper tubing in lengths to 36 in. forms the electrode and is secured in the spindle of the machine above the work table. The machine provides longitudinal movement but not rotation. Low-voltage current and cooling water are delivered to the head and through the electrode to the work in a circuit including the power unit shown on the left in the illustration.

Flow of current actuates a solenoid in the head to reciprocate the tube electrode through a small amplitude causing a sparkling action between the electrode end and the work. The net result is disintegration of the metal under the electrode with some disintegration of the electrode also. The tiny particles are carried away in the water.

BREVITY—Identify by IEN - 7012 if you write the maker

SEALING . . Rubber-metal disc acts as two way packing for a piston

Source: ALLIS RUBBER CORP.
130 N. Green St., Chicago 7, Ill.

Synthetic rubber is molded to a metal disc to make, in effect, a one-piece piston suited for use in place of cup leathers or rings in a piston assembly. The unit is available for equipment makers as original equipment on a quantity basis in sizes from 1 to 6 in. in diameter. It can be supplied to 12 in. on special order. Pressure capacity is to 1,000 pounds.

Catalog, "Mechanical Molded Parts", 36 pages, presents technical information on synthetic rubbers for mechanical molded parts, compounding to obtain desired characteristics, extruding, molding, mold design, and products including diaphragms, boots, special shapes, bonded assemblies with metal, gaskets, valve parts and cups. U packings, characteristics of natural and synthetic rubbers.

All Makers of These And All Other Products Are Listed In "THOMAS' REGISTER" . . Descriptions . . Ratings . . See Page 50

BREVITY—Identify by IEN - 7013 if you write the maker

ONE OF A LINE of GUARDIAN CONTROLS for INDUSTRIAL and AIRCRAFT Applications

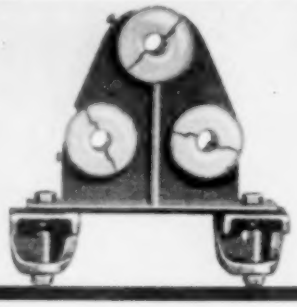
• Try the Guardian Series 335 D.C. Relay, one of hundreds of fine Guardian types. A general purpose relay with a wide range of applications, the Series 335 is built to the rigorous standard of aviation service. The Series 335 D.C. (low noise) Guardian Relays is now available Hermetically Sealed.

Write for your copy of the new Guardian Catalog S-H featuring Hermetically Sealed Relays.

GUARDIAN ELECTRIC

1620-H W. WALNUT STREET CHICAGO 12, ILLINOIS

BREVITY—Identify by IEN - 7014 if you write the maker



SPEEDIER CABLE INSTALLING with KEYSTONE RACKS

Why? Because Keystone Cable Racks don't have to be dismantled to place cables inside the porcelain insulated bushings.

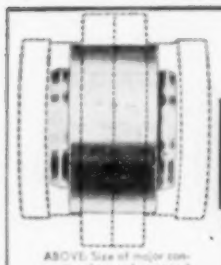
Put the cable in the opening . . . slip the bushing into position (bushings have a partial collar on one end) . . . tighten the locking setscrew . . . the job is done!

There's a Keystone Cable Rack for cables from 1/4" to 2 1/4" in diameter. The racks can be used on A.C. or D.C. systems, because the cable is only partially surrounded by metal. By adding a one-wire support, 4-wire, three phase installations can be made.

Get the complete details by writing for Bulletin 698.

ELECTRIC SERVICE MANUFACTURING CO.
1723 Cambria St. • Phila. 32, Pa.

BREVITY—Identify by IEN - 7015 if you write the maker



3/5 usual size!
1/2 usual weight!

NEW Sier-Bath GEAR COUPLING

ONLY 7 PARTS

—1/2 the wt. per HP!

ABOVE: Size of major conventional types (overlaid in outline) compared with Sier-Bath Gear Coupling of same shaft size.

• *Slashes time and labor costs*—only 7 parts! Assembled, uncoupled in seconds—no special tools, easy to align.

• *Saves design space, weight*—averages only 1/3 the size, 1/2 the weight of conventional gear couplings of same shaft size.

• *Cuts original costs*—prices lower than conventional gear couplings.

• *Needs less shaft space for assembly,* uncoupling—still fits existing designs, easily replaces old style couplings.

• *Reduces wear on coupled equipment*—less weight, smaller size reduces strain on shafts and bearings.

• *Decreases accidents*—no bolts, nuts, protruding parts—safe as a smooth shaft.

Standard, vertical, mill motor, spacer and floating shaft types—sizes from 3/4 to 6, HP 4 to 550. Special sizes and types on request. Send for further information—and/or for coupling (any size up to 2 1/2") for 30 day free trial.

Sier-Bath GEAR and PUMP CO., Inc.

Members A.G.M.A. Founded 1905

9256 HUDSON BLVD. N. BERGEN, N. J.

BREVITY—Identify by IEN - 7016 if you write the maker

NEW tool room FURNACE

Absolute Temperature Control to 850°F by DESPATCH

SIZES from 13 x 13 x 13 to 37 x 25 x 37

for Tempering, Drawing, Annealing, Solution Heat Treating

Designed for tool room or metallurgical laboratory work this modern streamlined DESPATCH furnace is speedy, convenient and flexible. Occupies small space, is easy to operate and costs little to install. Convection heat provides absolute temperature control throughout work chamber. All working parts enclosed to protection from bright cabinet with fully insulated hinged door providing rock convenience for all repeated heat cycling. Available in either electric or gas models.

Write today for Bulletin 513.

Minneapolis Office: 619 S. E. 8th St.
Chicago Office: 7070 N. Clark St.

DESPATCH OVEN COMPANY

BREVITY—Identify by IEN - 7017 if you write the maker

JOY WG-9 "Industrial-Air" COMPRESSOR

Saves space — gives you top efficiency — built for heavy duty

- ★ Full force-feed lubrication of all working parts
- ★ Replaceable cylinder liners and crosshead guides
- ★ Small floor area and simple foundation requirements
- ★ Anti-friction main bearings

17 Sizes—99.6 to 881 CFM
20 to 150 psi

FREE BULLETIN

For complete details, write for new Bulletin A-43, or

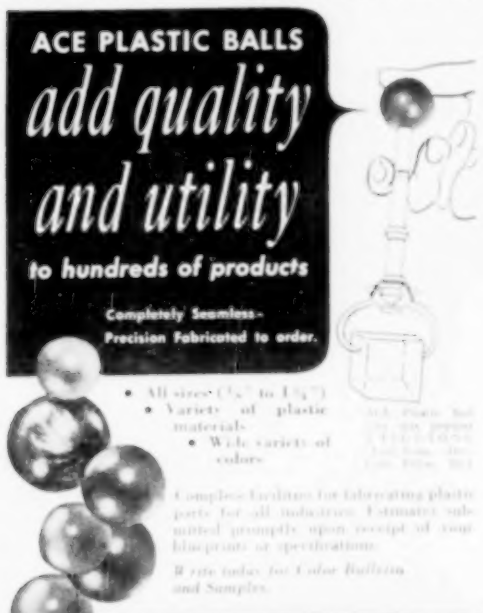
Consult a Joy Engineer

JOY MANUFACTURING CO.
General Offices: Henry W. Oliver Building
Pittsburgh 22, Pa.
IN CANADA: JOY MANUFACTURING CO. (CANADA) LIMITED
GALT, ONTARIO

BREVITY—Identify by IEN - 7018 if you write the maker

ACE PLASTIC BALLS
add quality and utility
to hundreds of products

Completely Seamless—
Precision Fabricated to order.



- All sizes (1/8" to 1 1/4")
- Variety of plastic materials
- Wide variety of colors

Complete facilities for fabricating plastic parts for all industries. Estimates submitted promptly upon receipt of your blueprints or specifications.

Write today for Color Bulletin and Samples.

ACE PLASTIC COMPANY
Precision Plastic Fabricators and Extruders
91-24 Van Wyck Blvd., Jamaica 1, N. Y.

BREVITY—Identify by IEN - 7019 if you write the maker

16" STREAMLINE EXHAUST FAN

29.50 tax incl.

- Heavy Duty
- More Air—2500 C.F.M.
- 110 volt, 60 cycle, A.C.
- Torrington Aluminum Fan Blades
- Unbreakable Steel Frame
- 1/6 H.P. Thermal protected motor
- One-year Unconditional Guarantee
- Model No. 16EF

"The BIG NAME in FANS"

STANDARD ELECTRIC
MANUFACTURING CO., INC.
WEST BERLIN, NEW JERSEY

BREVITY—Identify by IEN - 7020 if you write the maker

PIPE FITTING . . Geared swivel unit, crank operated, 4 sizes 2 to 4 inches

Source: RASMUSSEN MFG. CO.
12319 Industrial Ave., Hollydale, Calif.

New geared head applies with any of the company's ball-bearing swivel fittings of the Universal Service type to assemble pipe units for loading and unloading in connection with tank trucks, trailers, tank cars.

The assemblies are available with suitable packings to handle specified petroleum products at temperatures from sub-zero to 750 deg. F. Pressure capacity is to 1,000 pounds.

The crank-operated fitting employs a worm and gear in non-overhaul design so each assembly is self-supporting in any position and no counterweight is required. Recommended loading for the swivel head is 400 to 1,250 foot pounds. Its list price is $177.50 to $242.50. Two gear ratios in each of the four sizes is 60 to 1 and 264 to 1.

BREVITY—Identify by IEN - 7021 if you write the maker

PAINTING . . Metal priming liquid for aluminum, brass, steel, galvanizing

Source: UNITED CHROMIUM INC.
100 E. 42nd St., Room 1728, New York 17, N. Y.

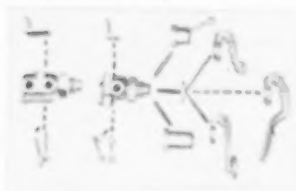
Applies on clean metal

Unichrome Primer P-10 is a metal priming material originally developed by Princeton Paint Laboratories and identified by them as Aviation Primer AP-30. The company has taken over manufacture and sale on a national basis. Application is by spraying or dipping to be followed by air drying or baking. The film air-dries dust-free in 5 minutes. It provides greatest durability when baked at 300 deg. F. for 20 min. or at 350 deg. F. for 5 minutes. The primer takes top coatings of lacquer, synthetic finishes, baking enamels.

BREVITY—Identify by IEN - 7022 if you write the maker

VALVE . . Piston type pneumatic for pilot duty, 2, 3 and 4 way design

Source: LOGANSPORT MACHINE CO.
913 Center Ave., Logansport, Ind.



New valve for pilot duty is made with two body designs as shown in the illustration each of which will take care of five interchangeable operating mechanisms. The valve is 3/4 in. port size, balanced piston construction with piston cups that wipe the filter when the piston is moved. Ports and internal passages are gun-bored to minimize flow resistance.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 58

BREVITY—Identify by IEN - 7023 if you write the maker

Get any type you need!

RIGHT "OFF THE SHELF" with these OHIO STOCK GEARS

Ohio Stock Gears are fit so many around to a few of the most widely used types and diameters pitches. Good, these gears are designed to take a long-life run, to meet the severest service of power transmission needs. • Your nearest Distributor can supply you, right out of his stock, spur, helical, bevel, miter, worm and worm gears as well as steel racks in Commercial Pitches from 24 to 1. Roller chain sprockets from 1/2" to 1 1/2" pitch. • And because these gears are stock, manufactured or assembled, you profit substantially for their use. You eliminate the excessive cost of special orders. You save manufacturing and delivery time and avoid delays. • Check your gear requirements with the nearest distributor or with us, and see for yourself the savings you can make by standardizing on Ohio Stock Gears.

ESTABLISHED 1915
THE OHIO GEAR COMPANY
1345 E. 179th St. • Cleveland 10, Ohio

OHIO GEARS

BREVITY—Identify by IEN - 7024 if you write the maker

OTC REPLACE 29 SIZES WITH THESE TWO

NEW GIANT ALLOY adjustable wrenches

THINNER-LIGHTER-STRONGER

Until now 29 wrenches have been needed to handle the jobs done by these two new giant adjustable wrenches. They are THINNER so get at the work easier. Strengthened for added strength at leverage points. Lightweight make job lasting easy. Economical—saves time, tools and materials. Large jaws handle simple cases.

Giant alloy wrench No. GA-24 is 24" long, 1/2" thick, weighs only 32 lbs. and adjusts to 13 standard sizes from 1 1/2" to 2 1/4". GA-18 is 18" long, 1/2" thick, weighs only 22 lbs. and adjusts to 10 standard sizes from 1 1/2" to 2 1/4".

ANOTHER EXAMPLE OF ENGINEERING THAT MAKES OTC TOOLS OUTSTANDING

OWATONNA TOOL CO.
371 CEDAR ST., OWATONNA, MINNESOTA

BREVITY—Identify by IEN - 7025 if you write the maker

Set it ~ Forget it!

Here's the answer to your burner problems. Read how KEMP cuts fuel costs, ends mixture tinkering, stops CO hazards . . .

Burn gas at a profit! With Kemp Carburetors and Burners in your plant—once the control is set to the mixture you want—no one need touch it again. Fuel-wasting tinkering is eliminated. Maintenance costs are negligible, just keep the Carburetors and Burners clean and your worries are ended!

SAFE, SURE, SIMPLE!

Every Kemp installation, whether for one burner or a thousand, is based on the famous Kemp Series "S" Carburetor. That means only one pipe to burners. No compressed air problem. At any point from 1% to 100% of capacity, you get the same precision mixture of air and gas.

BURNERS FOR ALL NEEDS

Kemp Burners come in all types and sizes—ribbon, pin point, fishtail—every standard model is immediately available. Special burners can be supplied quickly—designed especially for your job. All Kemp Burners are hand drilled, precision made, completely tested and guaranteed to deliver maximum BTU per hour/inch.

BEFORE YOU MAKE ANY INSTALLATION, large or small, learn how Kemp engineers can save you money! Ask one to call or send for Bulletin. (If you'd like a quotation, ask for special Quotation Form). Check coupon and mail today.

KEMP *Carburetors — Burners*
OF BALTIMORE

CARBURETORS
BURNERS
FIRE CHECKS
ATMOSPHERE & INERT GAS GENERATORS
ADSORPTIVE DRYERS
METAL MELTING UNITS
SINGEING EQUIPMENT
SPECIAL EQUIPMENT

THE C. M. KEMP MFG. CO., Dept. A-7,
405 E. Oliver St., Baltimore 2, Md.
Please send me: Bulletin
Special Quotation Form ☐ I'd like a Kemp Engineer to call
Name .....
Company .....
Address .....
City ..... Zone ..... State .....

BREEZE—Identify by IEN - 7027 if you write the maker

How Production-Wise Manufacturers

SAVE SANDING COSTS

ON LAND

ON THE SEA

The gleaming stainless steel that makes up these modern truck trailer bodies is polished with BONDITE® Jewelon paper belts. Because they cut faster, last longer, Jewel Abrasive Belts can roll up sanding savings for you!

Two coves on drum sanders were causing costly slow-downs in finishing plywood sheets for this boat builder. AP Sales Engineer recommended change to super-tough Jewel Bondex Garnet Film. Builder reports, "These Jewel drum covers are the best ever!"

*Minimum operation and first resultant

Whatever your product, whatever you want to cut costs—the better work Jewel Coated Abrasives. See your distributor or write us now!

Abrasive Products, Inc.

BREEZE—Identify by IEN - 7028 if you write the maker

NO FINER LIQUID SOAPS!

. . . FOR THE MONEY YOU HAVE TO SPEND

BALMA The PREMIUM SOAP

DOLGE is proud of its reputation for producing the very highest quality liquid soaps, and invites comparison on any basis—clarity, brilliance, pleasant aroma, rich lather. In addition DOLGE soaps are non-irritating, will not turn cloudy or develop rancid odors even upon prolonged storage.

Whether you select BALMA (comparable to the most expensively perfumed toilet soaps) modestly priced VELVA or low-cost KLEEN-WELL, you'll receive TIP-TOP VALUE PER DOLLAR SPENT!

VELVA MEDIUM-PRICED

KLEENWELL LOW-PRICED

DISPENSERS AVAILABLE IN SEVERAL TYPES

Write for literature—have your DOLGE Service Man demonstrate these outstanding liquid soaps.

The C. B. DOLGE Co.
WESTPORT, CONNECTICUT

BREEZE—Identify by IEN - 7029 if you write the maker

NOW! Delco Appliance's Revolutionary

NEW RIGIDFRAME MOTOR

Available for Your Needs!

Here's a new appliance motor—
New in mechanical features—
New in electrical performance!

DELCO APPLIANCE DIVISION
General Motors Corporation
Rochester, New York

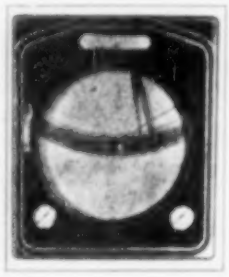
Rigidframe

Also manufacturers of Automatic Delco Heat and Delco Water Systems

BREEZE—Identify by IEN - 7030 if you write the maker

CONTROL . . Chart type instruments record, control temperature, pressure

Source: FISCHER & PORTER CO.
86 County Line Road, Hatboro, Pa



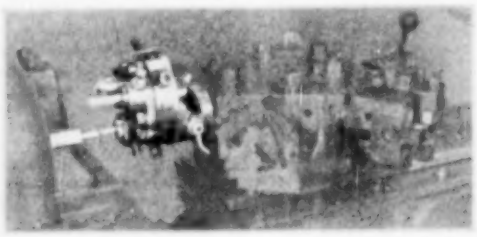
Ratotherm for temperature (range between overall limits of minus 125 deg. and plus 1,000 deg. F.) and Ratogage for pressure (in overall limits between 20 in. of mercury and 10,000 lb. per sq. in.) have been added to the company's line of recording and control instruments. Data sheets for the company's Pneumatic element for control transmission by air pressure. Either type of instrument can be supplied for hand, pneumatic, ratio or ram setting of the control point or can be assembled in cascade installations.

Ratogage and Ratotherm operation, selection of sensating elements, charts, features and general data are illustrated and described in Bulletin Catalog 90.

BREEZE—Identify by IEN - 7031 if you write the maker

LATHE TOOLS . . Three position head mounts in on turret tool position

Source: GILMORE ENGINEERING
27-31 E. Madison St., Chicago 2, Ill.



New head is known as the Brevolt or Turret Head Adapter. It adds three positions for tools in one position on a standard lathe turret. Each position presents a 1 in. hole for a tool shank with ⅝ in. tapped holes on each side. Overall face diameter is 4⅝ inches. Front to back of the head assembly is 2⅝ inches. The shank measures 2⅝ in. in length by 1 1/4 or 1½ in. in diameter in three sizes.

BREEZE—Identify by IEN - 7032 if you write the maker

FABRICS . . Woven from plastic.
booklet describes properties and fabricating methods

Tex-pow Mfg. Corp.
18-42 Worth St., New York 13, N. Y.

Properties of Woven Vinyon woven cloth, specialty and decorative fabrics are described in detail in new 24-page booklet "Lightle Woven Fabrics." Wrinkle resistance, mildew absorption, flex life are typical. In addition there is a section on fabrication methods which describes cutting, sewing, adhering, high-frequency welding.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 59

BREEZE—Identify by IEN - 7033 if you write the maker

NEW

AND RIGHT AT HAND

BOST-BRONZ ALL-PURPOSE BEARINGS
with Oil Film Always Present All Over

WHY THEY RE JUST THE BEARINGS YOU RE LOOKING FOR

WHY THEY RE RIGHT AT HAND

BOSTON

BOSTON GEAR WORKS
63 HAYWARD ST., QUINCY 71, MASS.

BREEZE—Identify by IEN - 7034 if you write the maker

The Truck That Goes MORE Places!

SHORTER OVERALL LENGTH

SMALLER TURNING RADIUS

MOTO-PALLET TRUCK
4,000 pounds capacity. Patented Nylogage shackles on load wheels insure smooth travel over uneven floors, elevator entrances, etc.

Due to more compact power unit, Moto-Truc Walkie Pallet Trucks are the shortest built, an invaluable feature especially where space is at a premium.

Moto-Trucs have the easiest control. All controls are in easy grip roller type handle—no reaching.

Dead man controls and other features make Moto-Trucs the last word in safety.

WRITE FOR LITERATURE

PALLET TRUCKS, HI-LIFT TRUCKS, PLATFORM TRUCKS

MOTO-TRUC
MOTORIZED BATTERY OPERATED
Walkie
PALLET TRUCK

The MOTO-TRUC Co.
1951 E. 59th Street
CLEVELAND 3, OHIO.
ORIGINATORS OF MOTORIZED HAND TRUCKS

BREEZE—Identify by IEN - 7035 if you write the maker

"DOUBLE-DUTY"

with SPEEDWAYS
Roller
Conveyors

The "Hi-Lo" Feature is one of the plus values you get with Speedways Roller Conveyors. "Hi" side permits moving units wider than frame. With conveyor inverted to "Lo" side frame acts as guard rail for units to be moved.

Easy portability, sturdy construction and simplicity of hook up that requires no tools are other features of both Speedways Wheel and SpeedTUBE Roller Conveyors. Available in 12", 15", and 18" standard widths, with wheel and roller spacing to meet your requirements, in 5' and 10' straight lengths and 45° and 90° curves, you can set up a material handling line to move your products. Write for literature and the name of your nearest Speedways representative.

KEEP 'EM ROLLING WITH **SPEEDWAYS** CONVEYORS, INC.
1244 Niagara St.
Buffalo 13, N. Y.

Represented and carried in stock by experienced material handling equipment engineers in principal cities. Also manufactured in Canada.

BREEZE—Identify by IEN - 7036 if you write the maker

OHIO ADJUSTING SCREWS

Range of thread sizes shown for each part.

Type ST Thumb Screws are made of steel or brass.
#10-32 to 1"-2-20

Ohio Double-Grip Clamp Screws
Made of steel
#8-32 to 1"-2-13

Type FS Adjusting Screws are made of steel or brass.
#10-24 to 1"-2-13

For information & samples send to

THE OHIO NUT & BOLT COMPANY
604 Front Street BEREA, OHIO

▼ BREVITY—Identify by IEN - 7037 if you write the maker ▼

A versatile self-locking nut

used as an adjusting nut —stays put anywhere on the screw

used as a load-carrying nut —offers triple locking action

PALNUT TRADEMARK
ADJUSTING TYPE SELF-LOCKING NUTS

1. As a load-carrying nut, provides vibration-proof assembly of light parts, replacing ordinary nuts and lock washers. Three locking forces are utilized, as shown in cross-section drawing. Has a pleasing appearance similar to "cap" or "acorn" finishing nuts.
2. As an adjusting nut, holds any desired setting or position on screw thread. Locking force is utilized as cross-section shows PALNUT in position to mesh of 6 powerful spring jaws which grip the outside of the screw.

Send details of your product for consideration. We therefore invite inquiries from PALNUT users.

Used either way, you obtain the PALNUT advantages of low cost, light weight and ease of assembly.

The Palnut Co., 59 Cordier St., Irvington 11, N. J.

PALNUT SELF-LOCKING **NUTS AND FASTENERS** for quick, secure fastening at low cost

▼ BREVITY—Identify by IEN - 7038 if you write the maker ▼

HOW TO "DESIGN AROUND" SCREW THREAD PROBLEMS WITH HELI-COIL INSERTS

Engineers can easily "design around" screw thread trouble by incorporating Heli-Coil Inserts into the original design. These precision-formed inserts of stainless steel or phosphor-bronze wire add strength to threads — prevent shearing, stripping, stripping — permanently protect threads against wear or stripping.

Important, too, are the savings in weight and space permitted by the use of Heli-Coil Inserts. They can assemble more — and sales appeal to the product — eliminate thread failure complaints. Heli-Coil Inserts meet all military, industrial and S.A.E. requirements.

A point plastic can be added to any product using threads to adding Heli-Coil Inserts — are there on all metals, plastics, ceramics and wood.

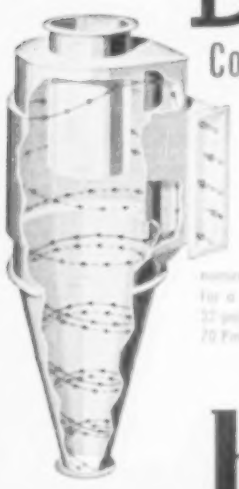
Write today for prices and detailed information.

HELI-COIL CORPORATION
47-149 Thirty-Fifth St., Long Island City 1, N. Y.

HELI-COIL CORPORATION

▼ BREVITY—Identify by IEN - 7039 if you write the maker ▼

Want the Answers on Dust Collection and Recovery?



Every industrial engineer should know about the patented von Tongeren "blow-off." Exclusive in the Buell dust-collection system, it makes possible dust collection that is efficient yet economical. Buell design eliminates plugging. For a full description, write for the new 32 page catalog to: Buell Engineering Co., 70 Pine St., Suite 3030, New York 5, N. Y.

buell

Engineered Efficiency in DUST RECOVERY

Manufacturing in the U. S. & Canada for Distribution Throughout North & South America

▼ BREVITY—Identify by IEN - 7040 if you write the maker ▼

TESTING . . Electrical instrument for sub-miniature electronic tubes

Source: HICKOK ELECTRICAL INSTRUMENT CO.
10544-48 Dupont Ave., Cleveland 8, Ohio

Model 539 is a new dynamic mutual conductance tester for operation on a 115 volt ac line to apply three ac voltages of 25, 6 and 2.5 volts and also a dc bias which is superimposed on the filament grid. Separate voltages can be applied to each element of the tube under test.

Provision is made for a milliammeter to measure plate current. Self-bias can be applied to the tube grid for operating a series. Tubes can be matched for mutual-conductance circuits. Fulton life can be forecast. The instrument is assembled in a carrying case that measures about 14½ by 11 by 7½ inches. Weight is 27 pounds.

▼ BREVITY—Identify by IEN - 7041 if you write the maker ▼

SLIP PROOFING . . Abrasive liquid to spray, brush or trowel on a floor

Source: MAAS & WALDSTEIN CO.
436-40 Riverside Ave., Newark 4, N. J.

We floors made safe

Dorvin Non Skid (trading as) will be packaged in 8, 30 and 50-gal. containers for applying from the floors where it is the product is general supply. It is secure for use on metal, wood, tile. It is impervious to attack by fruit juices, butter, milk, blood. It can be cleaned by brushing or washing. A primer is recommended for soft or porous surfaces and tiles.

▼ BREVITY—Identify by IEN - 7042 if you write the maker ▼

CONVEYING . . Incline belt unit mounts wire mesh belt for hot work

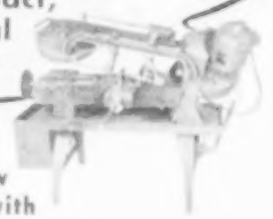
Source: RAPIDS-STANDARD CO.
342 Rapistan Bldg., Grand Rapids 2, Mich.

Forge Press Veyor designates new portable incline assembly to apply between forging operations or to handle hot work from a machine to a truck or bin. The assembly employs a coated wire mesh belt sufficiently strong to handle hot work pieces up to 25 pounds. It is made in 8, 12, 16-in. belt widths and in 4, 6 and 8-ft. lengths. The belt rides over 3-in. pulleys supported in sealed self-aligning ball bearings.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 50

▼ BREVITY—Identify by IEN - 7043 if you write the maker ▼

BIG saw performance in a compact, economical package



the WELLS No. 5 Metal Cutting Band Saw now available with wet cutting system . . . .

The advantages of wet cutting previously available only on larger machines are now in the hand of the Wells No. 5 Metal Cutting Band Saw. This pilot-operated coolant system reduces cutting time by increased cutting rate and increasing blade life per blade. Automatically controlled, the Wells Wet Cutting System is economical, reliable and simple. Power transmission and wear are reduced with prolonging blade life. Write today for complete information on how this system can save you money. Get full details from your dealer or write direct.

Write for 4 page folder, "Wet Cutting Band Saws."

Products by Wells are Practical

Wells

METAL CUTTING BAND SAWS

WELLS MANUFACTURING CORPORATION
1111 Mason St. Three Rivers, Mich.

▼ BREVITY—Identify by IEN - 7044 if you write the maker ▼

SYLPHON TEMPERATURE REGULATORS for greater room comfort

● The No. 1 Series of Fulton Sylphon regulators control steam supply to unit heaters, water heating coil valves, radiant heaters, etc.

Highly sensitive. Maintains action. Sturdy, self-contained, self-powered. Practically indestructible. Easily installed.

For complete information write for Catalog NN

FULTON SYLPHON DIVISION

ROBERTSHAW-FULTON CONTROLS CO. • KNOXVILLE 4, TENN.

Temperature Controls • Fulton Valves • Fulton Assemblies

▼ BREVITY—Identify by IEN - 7045 if you write the maker ▼

Don't monkey around with fragile profits!

insure production economies with Cherry Rivets

CHERRY RIVETS are installed from one side of your jobs by one man. Every cover and with lower cost because Cherry Rivets are installed as cents. A pulling action does the work on twisting, no bum marring. If you hammer and dim rivets, you take a moment rule and wear to fix leaks.

Address Department G-112

Cherry Rivet

CHERRY RIVET COMPANY
231 Winston Street, Los Angeles 13, California

▼ BREVITY—Identify by IEN - 7046 if you write the maker ▼

The Answer is often: USE SHAF-TITE* ROLLS

Many Patented Constructions

Choice of

METAL, RUBBER, or WOOD ROLLS

Send For NEW ROLL CATALOG No. 48

INDUSTRIAL ROLL DIVISION

RODNEY HUNT MACHINE CO.

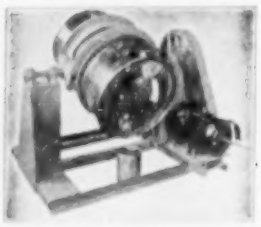
673 Main Street
*Reg. U. S. Pat. Off.

RODNEY HUNT

Orange, Mass., U.S.A.

BREVITY—Identify by IEN-7047 if you write the maker

BREVITY—Identify by IEN-7048 if you write the maker



CHANGE DRUM TUMBLER

Mixes in Suppliers' Drums

AVOIDS:

- The fire hazard of open drums
- Contamination of one product with another
- Cleaning of equipment between mixes
- Residual sludge

ASSURES:

- Uniform mix
- Easy inspection during operation
- Withdrawals in any quantity needed

ALSO:

- Portable ramps for fast insertion and removal of containers

The VOL-U-METER Company
Buffalo 16, N. Y.

BREVITY—Identify by IEN-7049 if you write the maker

BREVITY—Identify by IEN-7050 if you write the maker

DEODORIZING . . Ultraviolet lamp makes ozone to mask odors in an area

Source: GENERAL ELECTRIC CO.
1 Nela Park, Cleveland 12, Ohio

New lamp applies in a special fixture in a 110-volt circuit with a ballast. It generates ozone, permits its escape to a room area while shielding the ultraviolet rays to prevent eye injury. The ozone from one 4-watt 1½ in. lamp will mask odors in a space totaling 1,000 cubic feet. Initial application is in clothes-drying equipment.

Installation can be made also in refrigerators, beverage-vending machines, clothes closets, washrooms, elevators, reception and conference rooms, kitchens, passenger vehicles, ambulances, planes, trains, boats, sanitary cabinets.

BREVITY—Identify by IEN-7051 if you write the maker

PLASTIC . . Phenolic compounds, three types for molding applications

Source: DUREZ PLASTICS & CHEMICALS INC.
6 Walck Road, North Tonawanda, N. Y.

Three materials all impact type

Durez 13537 Natural is a new fabric filled compound employing a two-step resin for non-critical electronic prebaking. It makes molded parts with impact strength at 1.4 ft. lb. per in. on the Izod scale. Flow properties are good for compression or plunger molding.

Durez 14482 Black is similar to the Natural material but has impact strength at 2.2 ft. lb. per inch.

Durez 14658 Black molds like a general-purpose material but contains nitrile rubber and wood flour fill. It can be employed in parts having thin sections around metal inserts. It can be plunger or compression molded, has good surface appearance. Specification sheets will be sent on request.

BREVITY—Identify by IEN-7052 if you write the maker

TIMING . . Electronic interval unit actuates delay action control relay

Source: ROBOTRON CORP.
5568-72 West Chicago Road, Detroit 4, Mich.

Model 1C03C is a new action-time-delay relay for use in machine-control and processing circuits to impose a delay action interval that is variable overall between 3 cycles and 90 seconds. Operation is on 110-220-volt 60-cycle ac. The single-pole double-throw contacts rate 6 amp. on 110-volt ac. Overall dimensions are 4 by 5¼ by 5¼ inches. In the overall range are five timing intervals. The design permits quick application and removal.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 50

BREVITY—Identify by IEN-7053 if you write the maker

PRODUCT-PROVED WIRE

CONTINENTAL STEEL CORP. STEEL CONTINENTAL WIRE KOKOMO, IND.

● The worth of Continental wire has been *proved* in the products of hundreds of leading manufacturers. Continental wire is uniform in temper, uniform in coating. Whether your need is for a rust-resistant wire that can stand up under difficult forming operations . . . or for a shaped wire to provide master-looking, longer-lasting trim . . . Continental wire can help you build a better, more profitable product. Write Continental at Kokomo.

CONTINENTAL STEEL CORPORATION

BREVITY—Identify by IEN-7054 if you write the maker

Chemiseal 810W TEFLON Packing

Makes Any Valve A Packless Valve

- *Defies All Chemical Attack*
- *Reduces Torque on Spindle*
- *Will Never Freeze a Valve*

Here's a valve packing that's absolutely chemical-proof, lasts indefinitely, seals at low gland pressure and won't freeze a valve no matter how long unoperated.

Chemiseal 810W packing is made of solid Teflon. Teflon is chemically inert, can't be attacked by nor contaminate any process material. It's physically tough and suitable for temperatures from −150° F. to 550° F. Also, Teflon has unique natural slipperiness that insures free spindle operation at all times.

Note the cup-and-cone design of 810W packing. When pressure is applied, cones deform inward against the spindle, while cups expand outward against the stuffing box. This flexing gives the solid Teflon a mechanical resiliency that permits a tight seal at low gland pressure, reducing torque required to operate the valve.

When you order new valves from your valve manufacturer (within the service range indicated above), specify "Chemiseal 810W Teflon Cup-and-Cone Packing." Permanent, trouble-free service will more than justify the additional cost. Write for Catalog No. 810W.

Teflon Products Division
UNITED STATES GASKET COMPANY
658 N. 10TH STREET CAMDEN, NEW JERSEY

BREVITY—Identify by IEN-7055 if you write the maker

BREVITY—Identify by IEN-7056 if you write the maker

These Coolers meet every demand

THE HALSEY W. TAYLOR CO.
Warren, Ohio

Halsey Taylor
COOLER FOUNTAINS

BREEITY—Identify by IEN - 7057 if you write the maker

Look what's back of these plastic refrigerator shelf supports

When they came to the shelf supports the designers of this world-famous refrigerator had good reasons for using Simmons Spring-Locks. Spring-Locks are the only shelf supports that give this combination of advantages:

- They may be designed with any shape head—for any application.
- They are the only plastic shelf supports with steel inserts to carry the load.
- They cut material and assembly costs. No nuts, bolts or threadings. A half turn locks it securely.

Use Spring Lock also as a lifter arm—a door stroke—a hand rest—either in metal or plastic. Send for samples.

SIMMONS FASTENER CORPORATION
1750 NEW BRUNSWICK AVENUE, N. J.

Ten different designs of plastic Spring-Lock shelf supports.

The only plastic shelf support with a heart of steel.

Here's how it operates: 1 Insert fastener. 2 Half turn locks it securely.

Simmons Fasteners
QUICK-LOCK SPRING-LOCK ROTO-LOCK

BREEITY—Identify by IEN - 7058 if you write the maker

SPRA-CON

WASHERS

MULTI-STAGE, POWER SPRAY CONVEYORIZED TYPES.

DESIGNED, ENGINEERED & MANUFACTURED FOR YOUR PRODUCTION REQUIREMENT, AND FOR ANY TYPE METAL CLEANSING AGENT, INCLUDING BONDERITE.

CAN BE FURNISHED AS A SINGLE UNIT, OR A COMPLETE SYSTEM, WITH NECESSARY CONVEYOR, OVENS AND PAINT PROCESS.

CONSULT US NOW

THE SPRA-CON COMPANY
1404 N. WESTERN AVENUE
CHICAGO 22

BREEITY—Identify by IEN - 7059 if you write the maker

ORANGEVILLE HAND TRUCKS

"Keep Loads Alive"

Illustrated are a few of the many hand trucks we make for factory and warehouse use. They are typical of a wide range of available types and sizes which we can furnish in two-wheel and four-wheel designs. We also build special trucks to order to meet unusual handling needs.

Write for Catalog 15.

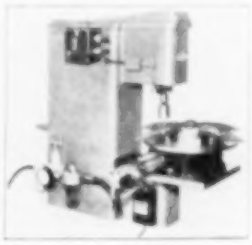
ORANGEVILLE

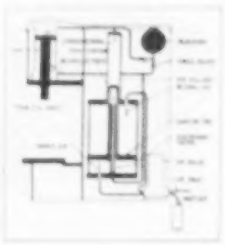
ORANGEVILLE MFG. CO.
ORANGEVILLE 15, PA.
Established 1879

BREEITY—Identify by IEN - 7060 if you write the maker

PRESS . . Air powered hydraulic cycles automatically with index table

Source: HY-AIR PRODUCTS CO.
2703-7 Probert Road, Jackson, Mich.





Operating control for this new assembly of the company's press starts with a reset timer on the side of the housing. The timer is set to a desired interval to a maximum of 99 seconds and a start button is pressed. This action closes the circuit to a solenoid valve in the pressureline and the ram descends. It holds for the set interval under full pressure and then returns by pressure to the top of its stroke.

The upward movement actuates an electric circuit causing the air-operated electrically-controlled index table to move to the next position. Movement of the table actuates a second circuit to restart the ram in downward direction. The repeat action continues until it is stopped by the operator so his activities can be concentrated loading and unloading. Mechanical or pneumatic ejection can be added.

The press is available in 2½ and 5-ton ratings based on 100lb. air pressure. Stroke is maximum at 2 or 5 in. and can be set at any intermediate point. Ram speed is adjustable also together with pressure, the latter at a regulator in the air line. The ram measures 1⅝ in. in diameter. Throat dimension is 6 inches. Maximum distance ram to bed is 9⅛ inches. The index table is available in 6, 8 and 12 position designs (Overall size is 12 by 20 to 30½ or 32½ inches.

BREEITY—Identify by IEN - 7061 if you write the maker

CUTTING . . Engine driven machine operates diamond blade to cut concrete

Source: FELKER MFG. CO.
1130 Border Ave., Torrance, Calif.

Cut depth can be set to 3½ in. for running a handy-bed on this new Standard design in the company's line of concrete-cutting machines. The action moves the wheel spindle down to start a cut for penetration through a concrete slab. Then the machine is traversed in connection with a guide finger.

The engine is a 7½-hp. Wisconsin air-cooled unit. It is belt connected to the ball-bearing spindle on which a 12-in. diamond-rim blade is mounted for right or left-hand operation. The machine mounts a 15-gal. water tank to supply coolant to the wheel. Connections also are provided for a hose leading from a near-by water line. The machine rides pneumatic-tired wheels. It can be pivoted on the rear wheels to turn in its own length.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 58

BREEITY—Identify by IEN - 7062 if you write the maker

FOR BETTER **TEMPERATURE** CONTROL of VATS · TANKS · DRYERS WATER or OIL HEATERS JACKET WATER COOLING DRYING or STORAGE ROOMS

EASY TO READ DIAL THERMOMETER

OTHER RANGES AVAILABLE

USE A POWERS REGULATOR

Reduces costs—helps to produce a better product. Maintains constant temperature. Prevents losses of OVER-heating. Saves steam and labor. Write THE POWERS REGULATOR CO., 2757 Greenview Ave., Chicago 14, Ill.

▶ WRITE FOR BULLETIN 329

SELF OPERATING

POWERS No. 11
TEMPERATURE INDICATING REGULATOR
Simple • Dependable • Economical

BREEITY—Identify by IEN - 7063 if you write the maker

INCREASE PRODUCTION WITH A *Royal* 515 STOOL

60 DAY *Free* TRIAL
examine it ... test it ... use it without obligation

- Sturdy Masonite seat imbedded in the seat pan.
- All welded frame.
- Leg extension for easy height adjustment.
- Oven-baked gray enamel finish.
- Fully guaranteed.

WRITE TODAY FOR DETAILS!

ROYAL METAL MFG. CO.
175 N. MICHIGAN AVENUE
CHICAGO 1, ILLINOIS

BREEITY—Identify by IEN - 7064 if you write the maker

Accurate-Dependable Batching

of light or heavy liquids

Complete Jacketed Pipe System for All Liquid Handling Problems

The FLUIDOMETER System is an accurate, dependable, automatic metering equipment for the batching of either light or heavy liquids. The FLUIDOMETER resets automatically. There is no lost time resetting metering controls, no errors due to incorrect resetting. Invaluable in large scale production work requiring steady repetition of operations. Available in jacketed construction for maintaining uniform temperature in process pipes. Write for new bulletin IL-49.

HETHERINGTON & BERNER INC. — 725 Kentucky Ave., Indpls. 7, Ind.

FLUIDOMETER
Automatic Metering System

BREEITY—Identify by IEN - 7065 if you write the maker

LAMSON UTILITY CONVEYOR
It's Portable...Adjustable...Reversible

Operates from horizontal position up to a maximum of 35 degrees and down to a maximum of 18 degrees. Length—11 ft. Belt—14 in. wide, packages wider than belt can be handled. Speed—60 ft. per minute. Capacity—maximum live load, 100 lbs. or 600 lbs. per minute. ⅓ H.P. single phase, 60 cycle, 110 Volt, geared head motor with 24 ft. connecting cord. Supplied with either cleats or non-slip belt.

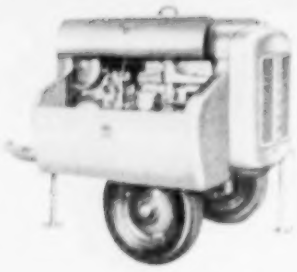
Only $295.00 F.O.B. Syracuse

Send order direct or write for free descriptive folder.

LAMSON CORPORATION
550 LAMSON ST. SYRACUSE, N. Y.

▼ BREEZE—directly by IEN-7066 if you write the maker ▼

Unistage COMPRESSORS



FOR PLANT MAINTENANCE

SCHRAMM Portable Engine Driven Compressors are available in sizes ranging from 20 to 420 cu. ft. actual air delivery adaptable for emergency repairs for plant maintenance including removing concrete foundations, steel erection, rock drilling, sewer and pipe line excavation, paint spraying and many other requirements. Write for Bulletin 4915.

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

▼ BREEZE—directly by IEN-7067 if you write the maker ▼

BRASS, COPPER AND OIL BOARD STENCILS • PIPE AND TUBE STENCILS • STENCIL CUTTING MACHINES • FOUNTAIN STENCIL BRUSHES • STENCIL INKS, POTS, PAPER

From the simplest paper stencil to the giant "Rug-Tite" pipe marking stencils with adjustable curvature, Pannier Bros. line includes stencils for every marking purpose. For shipping boxes, barrel and keg heads, steel sheets, concrete surfaces, telephone and power line poles, cable reels—whatever the surface or product to be marked, Pannier's complete line assures you of exactly the right type of stencil for legible, economical marking. Write!

Offices: Pittsburgh, Pa. Jacksonville, Fla. Chicago, Ill. Los Angeles, Calif. Youngstown, Ohio. Philadelphia, Pa.

THE PANNIER CORPORATION 101 Pannier Building Pittsburgh 13, Pa.

▼ BREEZE—directly by IEN-7068 if you write the maker ▼

INVESTIGATE "BEAR" SIMPLICITY and you'll find everything inside home and vibration in rotating parts greatly reduced and eliminated. For a reduced cost of effective machines and more per-formance of your finished products "Dear" Dy-Namic Balancing Machines have simple, maintenance-minimizing drive-rolling shoes and adjustable supports to give maximum control of balancing. Write today for Bulletin 2-D. Address Department 2-D, Bear Manufacturing Co., Rock Island, Ill.

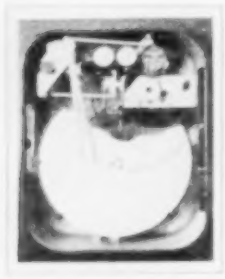
BEAR MANUFACTURING CO. Dept. 2-D, Rock Island, Ill.

"BEAR" STATIC AND DY-NAMIC BALANCING MACHINES

▼ BREEZE—directly by IEN-7069 if you write the maker ▼

CONTROL . . Circular chart recorder with control for pressure, temperature

Source: PENN INDUSTRIAL INSTRUMENT CORP. 3152 N. 17th St., Philadelphia 32, Pa.



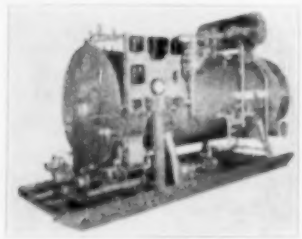
Companion design to the company's circular-chart recording gages for pressure and temperature, previously described (IEN-5705-50), is the new illustrated assembly of line and pressure control in a single-case arrangement. Four types are available to include on/off action, proportional, with proportional with reset, and proportional with derivative action. The latter can speed the rate at which a measured condition is corrected.

Bulletin 750, 8 pages, presents illustrated information on the line of circular-chart recording gages for temperature and pressure and on the new control assemblies. Schematic diagrams are included for on/off and proportional controls.

▼ BREEZE—directly by IEN-7070 if you write the maker ▼

BOILER . . Self-contained design 15 to 150 bhp., for heating or power

Source: YORK-SHIPLEY INC. 18 Jessop Place, York, Pa.



Illustrated is one of the low pressure units for heating purposes in the company's first line of self-contained boilers. In common with other low and high pressure assemblies in the line, it can be installed for right or left hand arrangement with reference to the panel board, gages, feed pump and other accessories.

It is available for gas, oil or combination firing. Assembly is by welding to Code specifications. The fuel air ratio can be adjusted to meet given conditions. Fiberglas cemented in place is the standard insulation on the boiler shell. Outside casing jacket is made of 14 gage steel.

▼ BREEZE—directly by IEN-7071 if you write the maker ▼

CLEANING . . Floor scrubbing machine washes, rinses and picks up the water

Source: FINNELL SYSTEMS INC. 2601 East St., Elkhart, Ind.

We overstated machine's ability

The last sentence of our description of the company's Nu-FINI floor scrubbing machine (IEN-4702-50, stated that it would pick up dry litter. This was incorrect because its vacuum action sucked dry dirt into front pickup and brought ...

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER Descriptions Ratings See Page 50

▼ BREEZE—directly by IEN-7072 if you write the maker ▼

A News Advertisement by the Glycerine Producers' Association

GLYCERINE IN INDUSTRY

5 new booklets describe Glycerine's wide range of industrial applications. Data on chemical and physical properties also included.

Source: GLYCERINE PRODUCERS' ASSOCIATION Dept. 32, 295 Madison Ave., New York 17, N. Y.

Here's new information on one of the most versatile products in the service of industry! Designed by the Glycerine Producers' Association, these easy to read, informative booklets are a wealth of information on this product's uses in industry, on the materials of its manufacture. Whether you are a 100% user, an occasional user, or a non-user of these products, you will find the information valuable. Write today!

WHY GLYCERINE? A general account of all industrial applications.
WHY GLYCERINE FOR AGE CONTROL AND PAPER MAKING?
WHY GLYCERINE FOR THE [illegible] AND COSMETICS?
WHY GLYCERINE FOR FOODS?
WHY GLYCERINE FOR [illegible]?

At the request of interested parties, the physical and chemical properties of glycerine, the uses and history of glycerine and many applications, are covered in specific detail in tables and graphs. Booklets range from 12 to 20 pages and are illustrated throughout. Copies may be obtained free of charge by writing the publisher, Glycerine Producers' Association, Dept. 32, 295 Madison Ave., New York 17, N. Y. or by using the enclosed Reader Service Form.

▼ BREEZE—directly by IEN-7073 if you write the maker ▼

BALDWIN Concentric-Pointer STRAIN INDICATOR FOR SR-4* STRAIN GAGES

EASY READING SELF BALANCING

For use with SR-4 Strain Gages. Operates a pointer over a range of 270° in a 10" dia. scale permits values to be read from a distance across shop or laboratory floor. Provisions included for zero and plus lockup adjustments, and for operation on one, two or three digital ranges. Automatic Self-Balancing. The Baldwin Locomotive Works, Philadelphia 42, Pa., U.S.A. Offices: Philadelphia, New York, Boston, Hartford, St. Louis, Chicago, Cleveland, Detroit, San Francisco, Seattle, Washington, Pittsburgh.

*T.M. Reg. U.S. Pat. Off.

TESTING HEADQUARTERS **BALDWIN**

▼ BREEZE—directly by IEN-7074 if you write the maker ▼

LOWER COSTS Increase Production with STONE "SWING-CUT"

• Cut off metals in any size or shape up to 3" solids and 4" pipe with milled like finish to tolerances of .005. Examples—cut 3" angle iron in 8 seconds, 2" round cold rolled in 7 seconds, 1" tool steel in 5 seconds, 2" steel tubing in 5 seconds. Non-ferrous metals cut at even faster speeds with steel saws. Fast cutting, self-centering vise for angle cutting to 45°. V-Block jaws available for cutting rounds and tubing.

Write for further information and name of your nearest dealer.

STONE MACHINERY CO., INC. 318 Fayette St. Mexico, N. Y.

HIGH SPEED CUTTING MACHINERY

▼ BREEZE—directly by IEN-7075 if you write the maker ▼

HARGNESS

STEEL STRAPPING DIVISION

BRAINARD STEEL COMPANY 2157 LARCHMONT AVE. WARREN, OHIO

BRAINARD STEEL COMPANY 2157 Larchmont Ave., Warren, O.
I would like to have a Brainard shipping specialist look over my packaging and shipping operations.
Name
Company
City State

IEN - 7076

Spray Nozzles

HIGH PRECISION INDUSTRIAL TOOLS

Every spray nozzle manufactured by Spraying Systems Co. is designed and accurately manufactured to meet exact specifications in spray volume, atomization, impact and pattern at any given pressure. That's why Spraying Systems nozzles are doing such effective cost cutting jobs on every recommended application. Find out what they can do in your plant. Write today for General Catalog 22 and Pneumatic Atomizing Catalog 23.

SPRAYING SYSTEMS CO.
Engineers and Manufacturers
3208 RANDOLPH ST. • BELLWOOD, ILLINOIS
Suburb of Chicago

IEN - 7079

MOTOR . . Brake equipped assembly, specified characteristics, to 20 hp.

Source: GENERAL ELECTRIC CO
Dept. 6X-201, Schenectady 5, N. Y.

New assembly of the company's Tri-Clad motor ...

The motor ...

IEN - 7080

DRIVE . . Worm gear speed reducer, 1/20 to 1/8 hp., 25 to 1,764 to 1

Source: WINFIELD H. SMITH CORP.
Davis St., Springville, Erie Co., N. Y.

Type DBRA is a new double-reduction worm-gear speed reducer ...

Maximum output ...

IEN - 7081

ELECTRONIC PRODUCTS . . Application drawings in new 48-page booklet on germanium diode uses

Three groups ...

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . *See Page 58*

IEN - 7083

Users Tell Our Story Best!

163 ORDERS
FROM 3 CUSTOMERS ALONE...TOTALED
1,421,402 LBS.

SPEED PATCH
WORLD'S FINEST, FASTEST, FLOOR FIXER!

TAKES ONLY
ONE MINUTE
PER SQUARE FOOT!

ROCK-TRED Corporation

IEN - 7077

Low Temperature Soldering Problem Solved!

CERROSEAL - 35 Flows at 260° F.

Manufacturer's Problem: To join two pieces of metal, one of which is bonded to a thermoplastic which must not be distorted by heat. Ordinary solders not satisfactory or practical.

The Solution: Extremely low-melting CERROSEAL-35, flowing at 260° F. solders parts perfectly without harm to plastic.

Cerroseal-35 was originally developed for use in making vacuum seals in laboratory apparatus between glass and metal tubing, has been proven invaluable for soldering metal to metal where the absolute minimum of heat applied and ease of application are essential.

Send for free descriptive literature outlining the uses for this metal.

CERRO DE PASCO Copper Corporation
Dept. 6, 40 Wall St., New York 5, N. Y.

IEN - 7084

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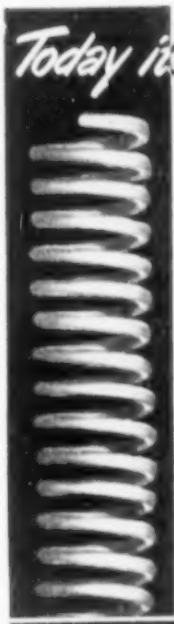

for Oil-Tempered Spring Wire

A MANUFACTURER'S own tests are necessary . . . but how his product performs in the field is the real proof of the pudding. Records show that Roebling Oil-Tempered Spring Wire brings users fewer machine stoppages . . . cuts down rejects . . . reduces preparation time.

Roebling has one of the largest and most modern specialty wire mills in America. Special techniques and precision machines assure a wire that is absolutely uniform in mechanical and metallurgical properties . . . a wire that will improve your product and your production.

Have your Roebling Field Man help choose the *right* Oil-Tempered Spring Wire – or other round, flat or shaped wire – for top efficiency and economy. John A. Roebling's Sons Company, Trenton 2, N. J.

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IEN - 7078

FOR TOP QUALITY SMALL ROLLS

IT'S THE Camachine Rollster

A tremendous hit among paper converters and paper goods manufacturers, the new *Rollster* now bids to become the most popular small roll slitter-rewinder ever built by Cameron. Pneumatic slitter units, which eliminate the need for slow, separate slitter adjustments, the labor-saving motor-driven riding roll lift, and the solenoid operated automatic stop for measuring the length of strip, are only a few of the outstanding features of this great new Camachine. You are invited to request complete information.

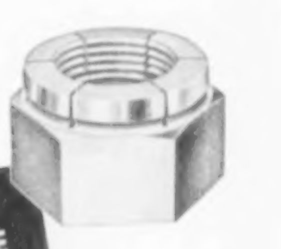
CAMERON MACHINE COMPANY
61 POPLAR STREET • BROOKLYN 2, N. Y.

IEN - 7082

Announcing the ALL-NEW Really RUGGED "101" TRANSPORTER

"101" Transporter

IEN - 7085



. . WON'T SHAKE LOOSE

FLEXLOC

ONE-PIECE SELF-LOCKING NUTS

The FLEXLOC is one-piece, all-metal . . . has simple design and long life. It is a Stop and Lock Nut that can be reused many times. Its "chuck-like", resilient locking segments lock the FLEXLOC securely in any position on a threaded member. It positively "won't shake loose", yet can be removed easily with a wrench.

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JENKINTOWN 18, PENNSYLVANIA

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Spraying gears with Alemite Versatal equipment cuts downtime—saves up to 90% on materials alone by eliminating over-lubrication. Extension spray head permits operator to spray gears from a safe distance—right while the machine is running.

FREE—a book of ideas on how Alemite Versatal Equipment can help solve your material handling problems. Address your request to Alemite, Dept. B-70, 1850 Diversey Parkway, Chicago 14, Illinois.

ALEMITE Versatal

Another Product of Stewart-Warner

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In floor maintenance

6 in 1

The Clarke Floor Maintainer does six jobs . . . provides fast, low-cost maintenance for all types of floors. Easy to use, perfectly balanced, noiseless, and quality-built, for years of uninterrupted service. A size for every need. *Write for free catalog!*

There's nothing like a **Clarke**

Approved by Underwriters' Laboratories

Clarke SANDING MACHINE COMPANY, 287 Clay Ave., Muskegon, Mich.
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● Immediately a "ROCKWELL" or "TUKON" Hardness Tester is put into use, its purchase price becomes its least important feature. From then on the only measure of value is the accuracy it every test made.

The dependable, enduring accuracy of all Wilson hardness testing equipment is assured by Wilson's long experience, the Wilson Standardizing Laboratory and Wilson Field Service Engineers. In terms of hardness-testing service, Wilson offers you more for every dollar you invest.

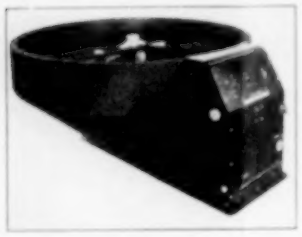
WILSON MECHANICAL INSTRUMENT CO., INC.
AN AFFILIATE COMPANY OF AMERICAN CHAIN & CABLE COMPANY, INC.
230 PARK AVENUE, NEW YORK 17, N. Y.

ACCO

▼ BREVITY—Identify by IEN - 7089 if you write the maker ▼

TESTING . . Rotating table checks effect of variable acceleration

Source: GENISCO
2231-35 Federal Ave., Los Angeles 64, Calif.



Instruments, mechanisms that are to be subject to acceleration in service are tested for their ability to withstand this force in varying amount on the company's new Accelerator. It consists of a cross arm pivoted at its center and equipped with an 8 by 8 in. test unit table and an adjustable counterbalance. The arm is driven at infinitely variable speed to 340 rpm. to produce the equivalent of 78G in acceleration force on the table-mounted equipment. The counterweight is secured in balancing position by tightening a knob in the center of the cross arm. The machine will handle work weighing to 25 lb. at 50 G or 15 lb. at 75 G.

The assembly carries eight electric circuits from the front of the housing to the rotating test table to permit electrical operation or measurement while the cross arm is rotating. There are also four air lines. An eyepiece on the housing front connects through optical equipment to permit observation of the unit under test as though it were standing still. An adjusting knob sets desired revolving speed and a tachometer reads the speed.

A scale provides for conversion between speed in rpm. and acceleration in terms of G units. A Veeder Root time interval counter and reset knob counts full rotations in complete revolutions and tenths for a selective 15 to 20 second interval. The housing includes a protective wall around the cross arm. Overall size is 65 by 56 by 28½ inches. Weight is 450 pounds.

▼ BREVITY—Identify by IEN - 7090 if you write the maker ▼

GAGE . . Rounded anvil micrometer for application on curved surfaces

Source: L. S. STARRETT CO.
100 Starrett St., Athol, Mass.

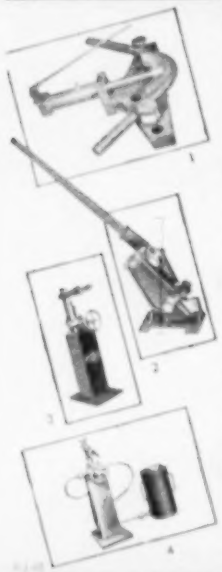
Wall thicknesses of tubes, cylinders, bearing races to 1 in. in thickness can be measured in thousandths by application of this new micrometer. Its round anvil applies on the interior surface for the required point contact. It can be used on bores as small as ⅝ inch.

The gage frame, thimble and sleeve are finished in no-glare satin chrome which also is rust resistant. Markings are sharp and clear. Decimal equivalents are stamped on the thimble. Threads are ground into the solid hardened and stabilized spindle. H-Micro finish is employed on the anvil and spindle end that make work contact.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 50

▼ BREVITY—Identify by IEN - 7091 if you write the maker ▼

WATSON-STILLMAN



PORTABLE PIPE BENDERS

Bends all standard, extra heavy and double extra heavy steel pipe from ⅜ in. to 2 in. inclusive, as well as standard weight pipe up to 3 in. diameter. Also handles solid mild steel bars up to 2 in. diameter.

Write for Bulletin A-7

WIRE ROPE SHEARS

W-S wire, cable and bar shears provide years of trouble-free general service. They are light and portable for convenient on-the-job use.

Write for Bulletin A-6

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Single and double plunger types, with reservoirs of different capacities to suit the job, these hand pumps have a wide application for operating small hydraulic tools, jacks and other hydraulic equipment, and for general hydrostatic testing purposes.

Write for Bulletin 240-A

HYDRAULIC JACKS

These sturdy units, with either independent or integral pumps, are useful for many jobs in construction and maintenance. Capacities from 10 to 500 tons.

Write for Bulletin 710-A

Distributors Products Division
WATSON-STILLMAN
Roselle, New Jersey

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PORTABLE HUMIDITY RECORDER

Check condition and distribution of air in various parts of the building with Bristol's handy Portable Humidity and Temperature Recorder.

Used in hundreds of institutions, factories, office buildings, etc., to give a continual, visual picture of humidity and temperature. Easily carried, set on table or hung on wall.

Immediate delivery from stock.

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A COMPLETE LINE OF AUTOMATIC CONTROLLING AND RECORDING INSTRUMENTS FOR AIR CONDITIONING

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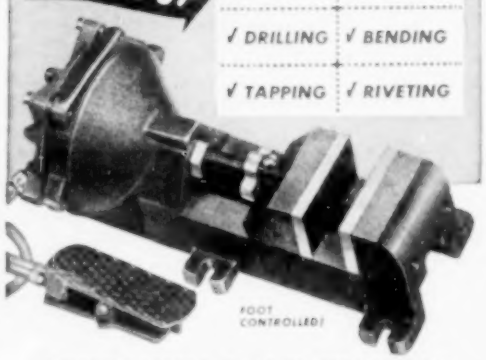
SPEEDS UP

✓ MILLING ✓ PUNCHING
✓ DRILLING ✓ BENDING
✓ TAPPING ✓ RIVETING



GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving both hands free to produce more! Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and Fittings . . . . . only **$29.90**

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AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

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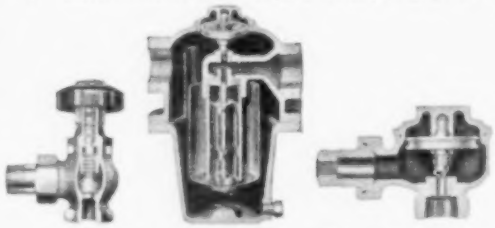

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Repair or replace worn or obsolete steam-wasting units with Illinois Specialties.

Equip your radiators with smooth-acting Illinois Supply Valves and sensitive steam tight Illinois Thermo Traps.

Improve system operation by replacing thermostatic drip traps with Illinois Float and Thermostatic Traps whenever rapid elimination of condensate is essential.

Illinois Float and Thermostatic Traps are made in three Series to meet a wide variety of applications and for operating ranges from 30 pounds pressure to 25 inches vacuum.

Investigate! Compare! Try Illinois Traps on your worst service and be guided by results!

ILLINOIS ENGINEERING COMPANY
INCORPORATED 1900
RACINE AVENUE AT 21ST STREET • CHICAGO 8

BREVITY—Identify by IEN - 7095 if you write the maker

MEAD SPECIALTIES COMPANY

4114 NO. KNOX AVE., DEPT. E-76-A, CHICAGO 41, ILL.

BREVITY—Identify by IEN - 7096 if you write the maker

Why Does U. S. Industry Buy More *Lightnin'* Mixers

MIXCO Engineered

Than Any Other Kind?

There are several reasons why LIGHTNIN Mixers are "first choice" of U. S. industry:

- *Special Ball Bearing Motors* . . . Many types, all specially designed for mixer operation.
- *Materials that Fit Your Needs* . . . LIGHTNIN Mixers are supplied in all machinable corrosion-resistant metals.
- *Most Complete Line* . . . Every possible degree of agitation, using lower-cost *standard components*.
- *Nothing Extra to Buy or Build* . . . Every LIGHTNIN delivered ready to mount on tank and start mixing.
- *No Hunting for Replacement Parts* . . . We carry complete stock, ready for shipment.
- *Unique Engineering Help* . . . MIXCO's 25 years of agitation experience at your service. Exclusive data used by our engineers tells you in advance what results will be . . . permits *accurate* sizing of units . . . conserves horsepower . . . avoids costly breakdowns.

GET THIS LIGHTNIN CATALOG . . . Packed with helpful facts on fluid agitation with LIGHTNIN Portable Mixers. Ask for Catalog B-75.

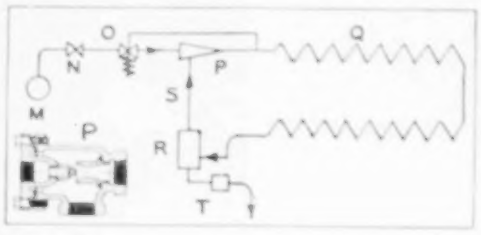
MIXING EQUIPMENT CO., Inc.
(MIXCO)
1021 GARSON AVENUE ROCHESTER 9, NEW YORK
In Canada: William A. J. G. Geary, Ltd., Toronto

REPRESENTATIVES IN PRINCIPAL CITIES

BREVITY—Identify by IEN - 7098 if you write the maker

HEATING . . Steam circulator for driers, evaporators, stills, platens

Source: SARCO CO.
Empire State Bldg., Room 2925, New York 1, N. Y.



Venturi design is employed in a new steam circulator that applies with associated equipment to make up a closed pipe loop heating circuit between a pressure steam supply and a trap to a return line for condensate disposal. The equipment applies to maintain good steam movement through the heating loop and steady disposal of the condensate to keep the heat exchange surfaces dry and operating efficiently. Steam circulating systems is the designation.

A unit installation is diagrammed in the illustration showing with the steam supply main M, a stop valve S, reducing valve O, the circulator P, the heating loop Q, the separator R and the trap T leading to a condensate return line. Steam reaching the separator is picked up by suction set up in the throat of the circulator and is returned to the heating loop through the connecting line N.

Technical Bulletin 4, 8 pages, pictures and diagrams the equipment and provides detail explanation. Examples of installations and the results obtained are included with a data page on which to note specific conditions to send to the company for its recommendations.

BREVITY—Identify by IEN - 7099 if you write the maker

CONVEYING . . Portable incline belt, 14 and 18 in. widths, by 260 to 380 in.

Source: A. B. FARQUHAR CO.
140-44 N. Duke St., York, Pa.

Three lengths are standard at 260, 320 and 380 in. in this new portable adjustable incline belt conveyor. Each is made in 14 and 18 in. belt widths with easily spaced cleats particularly for coal handling. The shortest unit is adjustable for height between 7 and 11 ft. at the discharge end with 6.00 by 16 in. pneumatic or 42 in. steel wheels. The longest adjusts between 8 and 12 feet. Mounting employs a 4-in. channel frame between the belt assembly and the wheels. Motor or gasoline engine can be specified.

The construction employs ball-bearing head pulley and countershaft, bronze oil-impregnated tail pulley bearings. The frame is plate construction with protection for the return run against dust and lump pickup. Illustrated detail information is contained in 4-page Bulletin 350.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 50

BREVITY—Identify by IEN - 7100 if you write the maker

HANDLE SCRAP FASTER — EASIER

This Burro is handling scrap faster and easier because it moved itself and several cars to the job quickly—and started work without delay. Burros equipped with magnet, clamshell bucket, dragline bucket, tongs or hook are saving time and money on many jobs in every type of industry. Their powerful draw bar pull (7500 lbs.) and fast travel speeds (up to 22 MPH) make them efficient switch engines too—you can spot cars where and when you want them at a moment's notice. There's no waiting time when a Burro is on your track.

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CULLEN-FRIESTEDT CO., CHICAGO 23, ILL.

BREVITY—Identify by IEN - 7101 if you write the maker

COST CUTTER!

Saw NON-FERROUS METALS AND PLASTICS WITH THE MOTCH & MERRYWEATHER

Carbide Tipped BLADE

Solid — up to 36" dia.
Segmental — 11" to 36" dia.
Prices quoted upon request.

More cuts and more accurate cuts between regrinds add up to a lower cost per cut. Fewer regrinds also mean more usable, profitable operation. Clean, square ends minimize finishing expense. One M. & M. carbide-tipped blade has been known to outlast over 100 ordinary blades. Please define your requirements and expect a convincing recommendation.

Write for Bulletin 230 Q

THE MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING · CLEVELAND 13, OHIO

AT YOUR COMMAND - AN UNPARALLELED EXPERIENCE IN CIRCULAR SAWING

BREVITY—Identify by IEN - 7102 if you write the maker

Heavy molds are handled smoothly and carefully with a simple crane with extended hand-chain wheel on the hoist.

GET THIS BOOK! Inexpensive hand-propelled

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THE CLEVELAND CRANE & ENGINEERING CO.
4214 East 281th St. Wickliffe, Ohio

CLEVELAND TRAMRAIL

BREVITY—Identify by IEN - 7103 if you write the maker

THIS POINT WILL END YOUR LOOSE SET SCREW PROBLEMS

UNBRAKO

SELF-LOCKING HOLLOW SET SCREW WITH MONEY-SAVING KNURLED POINT "WON'T SHAKE LOOSE"

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 14, PENNSYLVANIA

JULY 1950 INDEX TO ALL PRODUCTS

How to find what you need:

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Next use this index [illegible]

Now take one subject [illegible]

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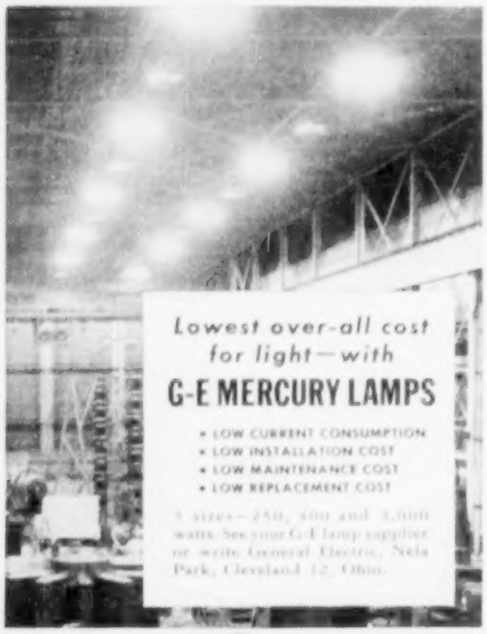

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Gives you the information you need simply, quickly. Eliminates lengthy calculation. And just as surely, STOW flexible shafting is the right answer for any problem of transmitting power through a curved path around obstacles, or from one level to another.

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STOW MANUFACTURING CO.
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IN PRESSURE LUBRICATION

ON HYDRAULIC MECHANISMS

FOR FUEL OR LIQUID TRANSFER

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TUTHILL PUMP COMPANY
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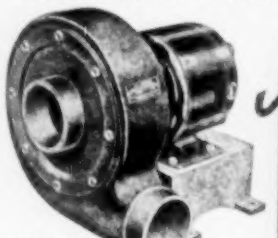

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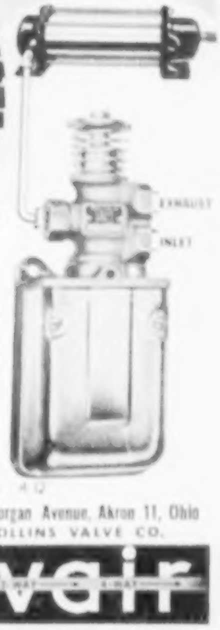
This VALVAIR SOLENOID OPERATED AIR CONTROL VALVE is Sensationally Dependable!



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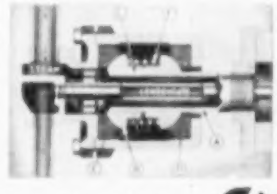

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- SYNTHETIC RUBBER SEAL
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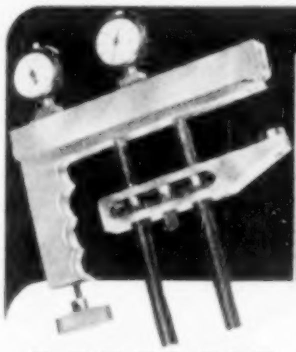

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"I WISH I HAD"

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It is published to invite your suggestions and comments, which are forwarded immediately to the originator, just as we will be happy to publish similar problems for you.

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FASTENINGS . . . "I wish we had a buyer for all or part of a considerable inventory of standard bolts and nuts in steel and brass. The stock is in Chicago. A list is available on request." **IEN W-104**

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NEW PRODUCT . . . "I wish we could locate a company interested in purchasing tools, dies and assembly fixtures on three models of outdoor ball bearing roller skates on which we have discontinued production. The equipment is in Minneapolis." **IEN W-106**

NEW PRODUCT . . . "I wish I had contact with a manufacturer to produce and sell a motor driven suction booster for use in a furnace stack. The unit is for the home market. Patent applications were filed last year." **IEN W-107**

NEW PRODUCT . . . "I wish I had contact with a manufacturer interested in manufacturing and selling my new patented tractor tread on a license basis. It is patent No. 2470801." **IEN W-108**

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SAFETY DIRECTOR . . . "I wish I had contact with an industrial plant, preferably in the middle-west, that needs the services of a director of health and safety with nine years of experience in this subject in the industrial field and with a Master's Degree from Ohio State University. I am at present in Indiana." **IEN W-112**

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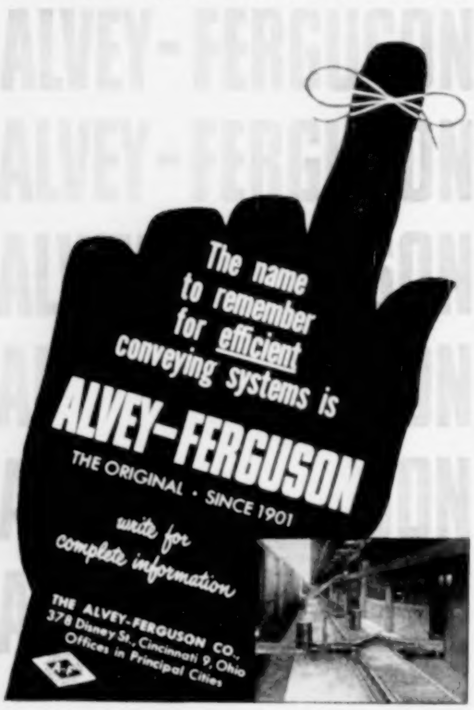

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